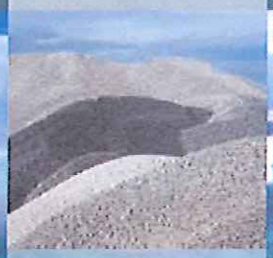
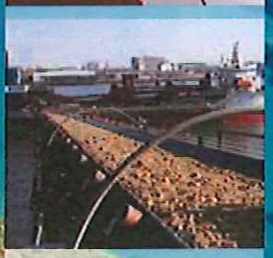
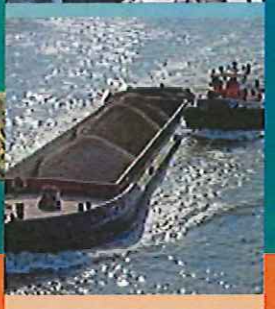
UK Minerals Forum

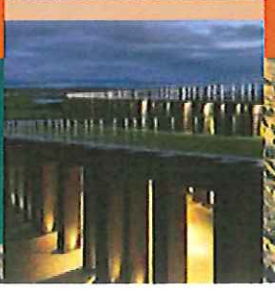
The future of our minerals

November 2014









A summary report

THE UK MINERALS FORUM

The UK Minerals Forum (UKMF) draws together key stakeholders to debate and inform Government and the public on the prudent use, sustainable management and supply of UK minerals. It has a broad membership (see back cover) drawn from industry, regulators, environmental groups and Government, and holds regular sessions designed to research and report on critical issues. The Forum is a key contributor to the CBI Minerals Group's Living with Minerals conference series.

Given concerns over the UK's ability to meet its future minerals needs, the UKMF has set up a working group to explore the impacts of potential future scenarios on the social and economic well-being of the nation as a whole. In order to identify drivers for the future, it has first taken a backward look at trends in minerals production in the UK over the last 40 years[1].

It has then gone on to seek views from different minerals sectors and has run a workshop to explore the consequences of three different future scenarios[2],[3]. From all that, it developed the recommendations contained in this summary report for consideration by Government, regulators, NGOs and by the industry itself.

SUMMARY

An adequate and resilient supply of minerals is essential to the growth of the UK economy and the well-being of the population in terms of security of energy supply, renewal of infrastructure and increased climate change resilience.

While we have had the luxury of being able to take availability of minerals for granted in the past, future supplies are by no means guaranteed and this report highlights a number of issues that need to be considered. They include global competition for raw materials and investment concerns within the industry arising from uncertainty about the future relationship of the UK with the EU. The future of our energy minerals is a particularly pressing issue, with a current question mark over the potential of unconventional energy resources.

Long-term continued access to minerals is considered crucial if the UK is to achieve sustainable economic growth and rebalance its economy towards production and manufacturing.

Positive action must now be taken by Government as well as by statutory regulators, NGOs and the industry to ensure continuity. We believe there is a need for a policy, regulatory and fiscal framework that encourages sustainable production while balancing economic, social and environmental priorities.

With goodwill and determined effort, it is surely possible to conserve what is essential in our landscapes, habitats and cultural heritage while meeting UK demand for minerals over the 35 years to 2050.

Photo: Kier Mining

[1] Trends in UK production of minerals. Future Minerals Scenarios for the UK Working Group. February 2014. http://www.bgs.ac.uk/ukmf/home.html

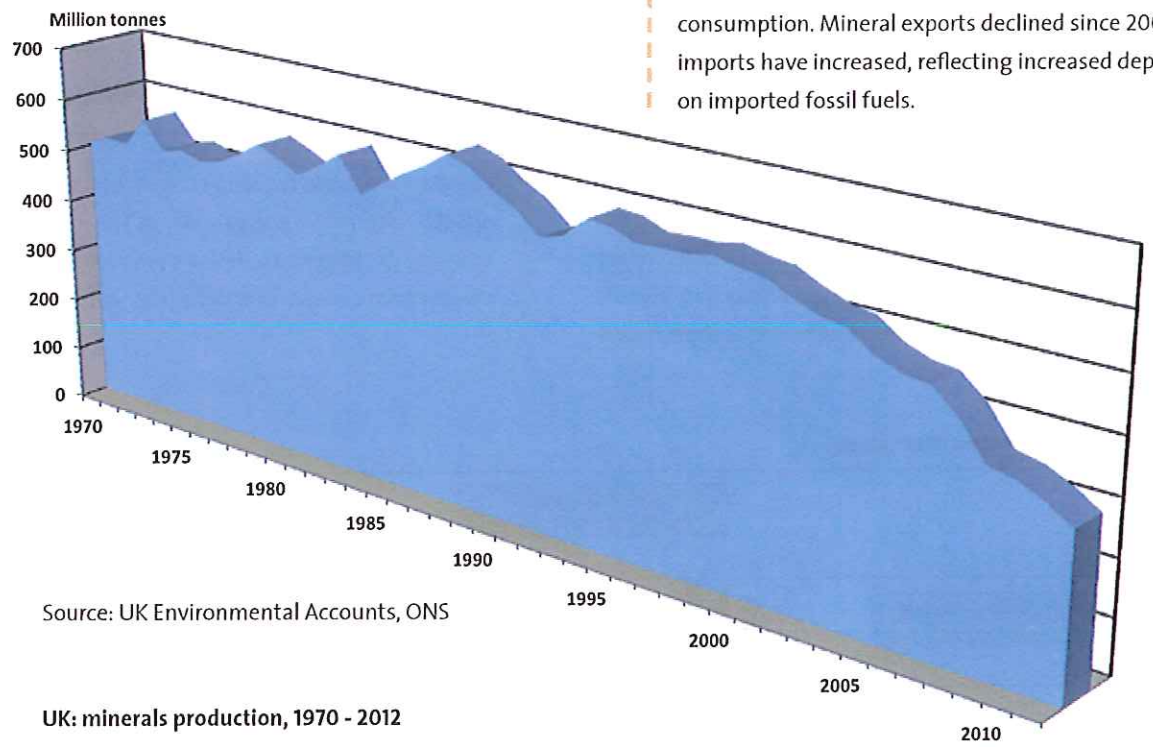
[2] Future Minerals Scenarios for the UK. Report from the scenarios workshop. November 2013. Waverley Management Consultants Ltd. http://www.bgs.ac.uk/ukmf/home.html

[3] Future minerals scenarios for the UK. Future Minerals Scenarios for the UK Working Group. July 2014. http://www.bgs.ac.uk/ukmf/home.html

PRODUCTION TRENDS

We are fortunate to have substantial indigenous resources of many of the minerals we need. We have taken a backward look at production over the last 40 years, during which major changes have taken place in the fortunes of each of our extractive sectors. Our aim is to assess whether the past enables us to identify drivers for the future.

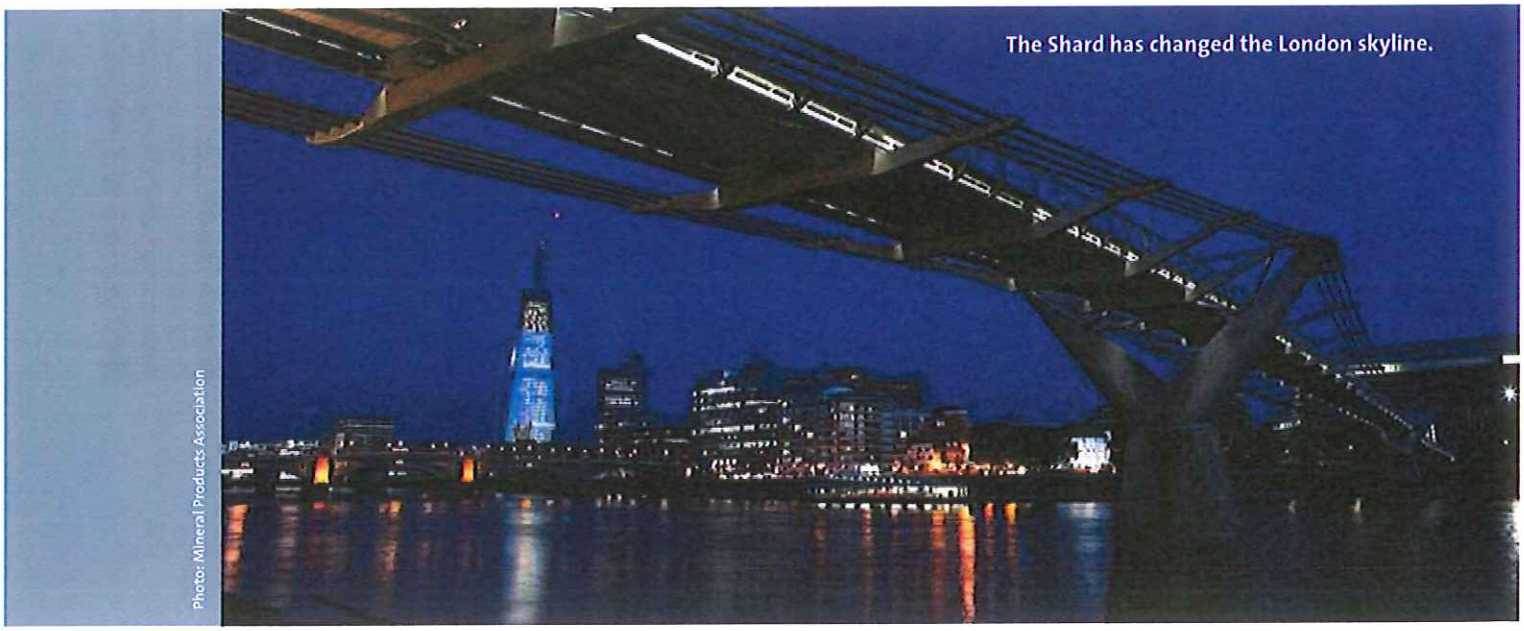
UK minerals production increased until the late 1980s but then declined, markedly so since 2000. This was mainly due to falling fossil fuel output and then the effect of the recent recession on construction minerals. Over the longer term, the data may indicate under investment in housing and infrastructure and the lost value resulting from importing manufactured mineral products. Moves to re-balance the economy through increased investment in construction could reverse the overall fall in UK minerals consumption. Mineral exports declined since 2002 while imports have increased, reflecting increased dependency on imported fossil fuels.



Source: UK Environmental Accounts, ONS

UK: minerals production, 1970 - 2012

There is no doubt that UK's resource security and its longer term access to mineral supplies from both domestic and overseas sources will remain a key issue for many years to come.



The Shard has changed the London skyline.

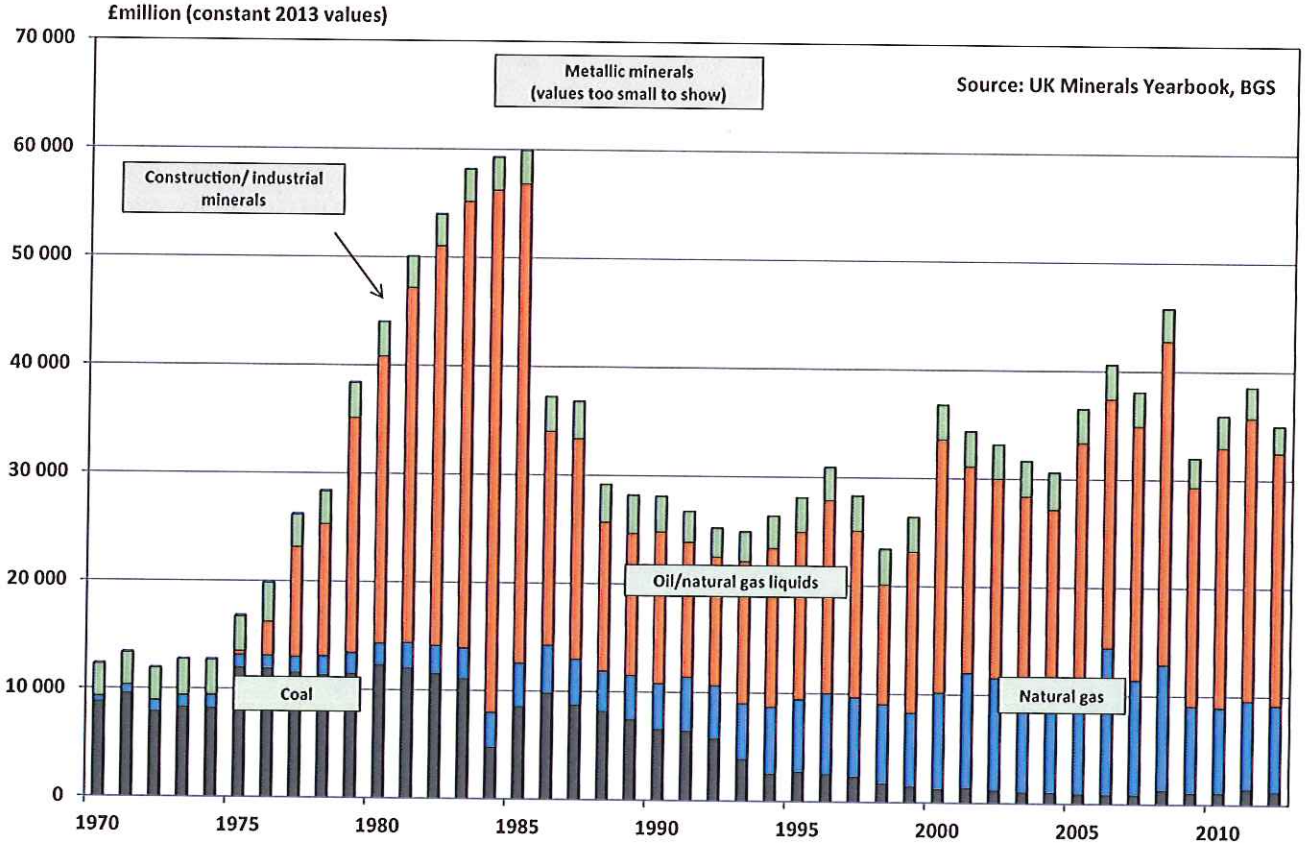
Photo: Mineral Products Association

The carbon issue

The UK is in transition towards a low-carbon economy with the aim of achieving a UK greenhouse gas emissions target for 2050 that is 80% below the 1990 baseline. This has considerable ramifications for the minerals industry, notably for fossil fuels used in electricity generation and for other energy intensive industries such as ceramics, glass, chemicals, cement, lime and plaster products, all of which are consumers of minerals principally sourced in the UK. The cumulative energy tax regime and, for example, the Carbon Floor Price applied only in the UK, is proving very challenging and placing these industries potentially at an energy cost disadvantage which may threaten their international competitiveness and ultimately their ability to supply UK markets. An increasing dependency on mineral imports (especially coal and mineral-based manufacture) has effectively exported our carbon footprint to our trading partners, with prospects for the problem to be further exacerbated.

Value of minerals output

Minerals extraction and processing is an important primary industry. Mining and quarrying (including oil and gas extraction) contributed about £34,000 million in 2012. With declining oil and gas production from the UK Continental Shelf, the contribution to the national economy will fall in the long term though this may be offset by alternative energy sources. The true value to the economy of indigenous minerals production is, however, derived from downstream industries and employment.



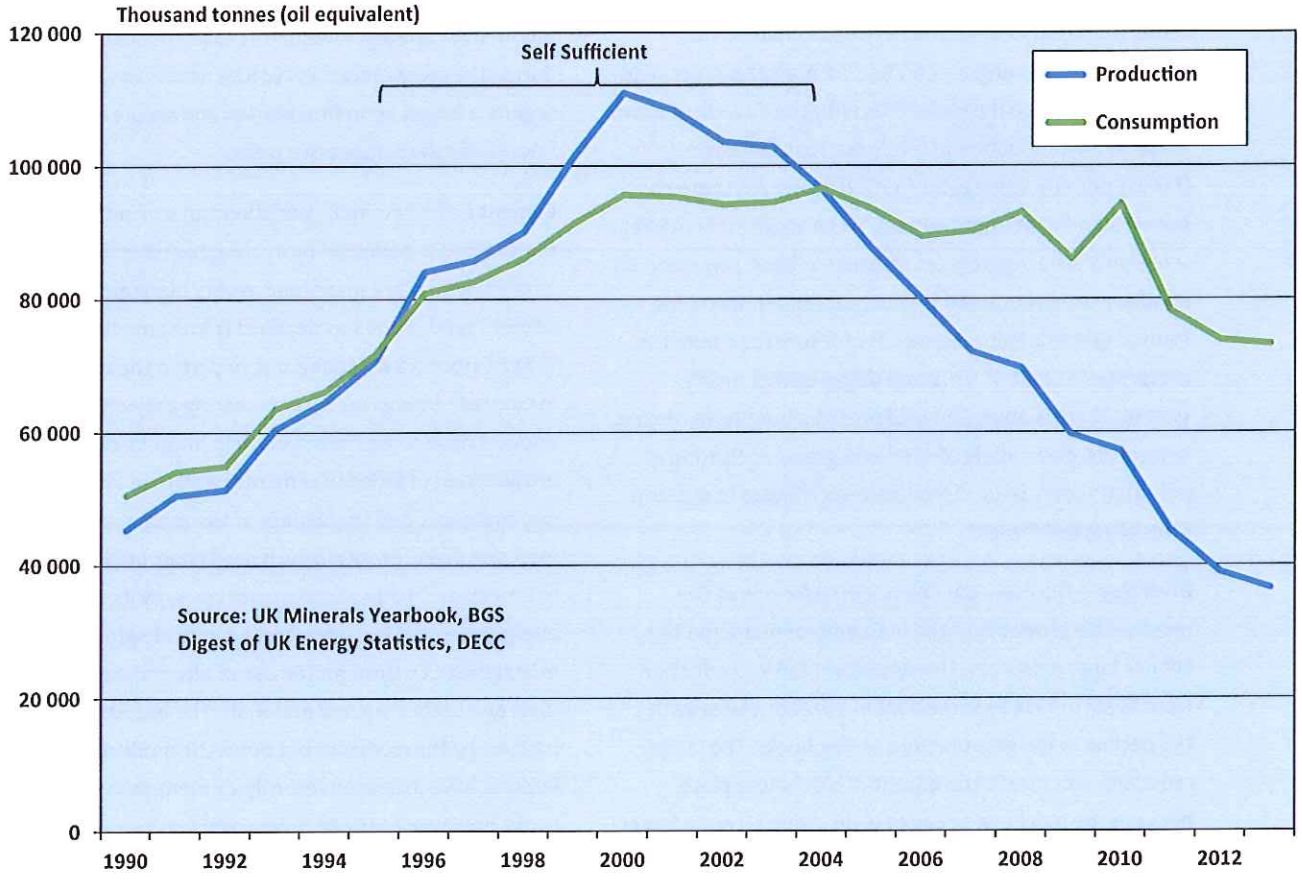
UK: value of mineral production, 1970 – 2012 (constant 2013 values; ex-works sales basis)

Energy minerals

The discovery of natural gas in 1965 and oil in 1970 meant that UK emerged as a major world producer of hydrocarbons. The value of **oil** production soon overtook that of coal and peaked at £48.6 billion (in real terms) in 1984. With rising prices, it was still worth £23 billion in 2012. Oil production peaked at 137.6 Mt in 1998 but has subsequently declined to 40.6 Mt in 2013.

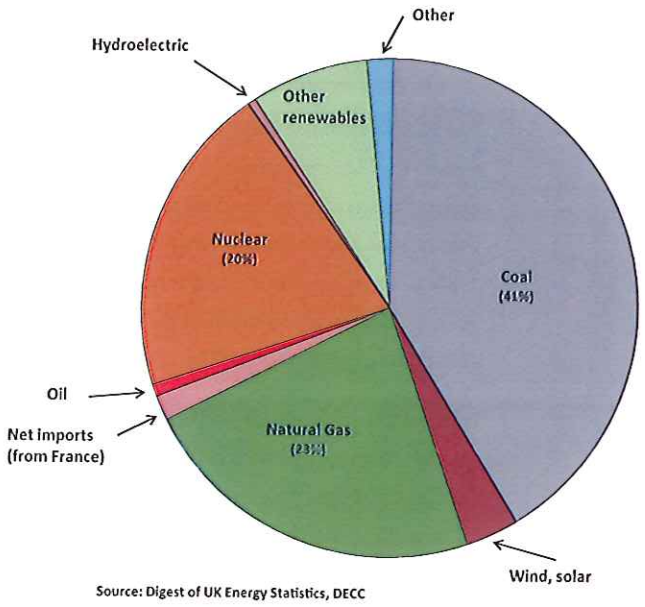
Natural gas grew rapidly in the late 60s and early 70s though few would then have predicted it would become the favoured fuel for electricity generation, rising from 1% in 1990 to 40.5% in 2010 though falling back to 23% in 2013 because of price rises. It overtook coal in its value in 1993. Rapid depletion of reserves since the 1990s means that UK will become increasingly dependent upon imports unless other forms of gas extraction such as shale gas prove viable and environmentally acceptable.

Photo courtesy iGas Energy



UK: production and consumption of natural gas, 1990 – 2013

UK deep-mined **coal** production has been in decline since its peak of 292 Mt in 1913 and the nation became a net importer following the miners' strike of 1984. Concerns over security and diversity of energy supply have not halted the decline and today only three major deep mines still operate. Surface mining has proved to be cost-effective and overtook deep mining in 2007, and with total identified resources estimated at 839 Mt in 2012, production could be sustained if economically and environmentally viable. Total UK coal consumption in 2013 was 60.4 Mt, of which some 49 Mt were imported. Coal then supplied some 41% of total fuels for electricity generation, but while it will continue to play an important role for the next 20 years, its long-term future will depend upon development of carbon capture and storage technologies.



Source: Digest of UK Energy Statistics, DECC

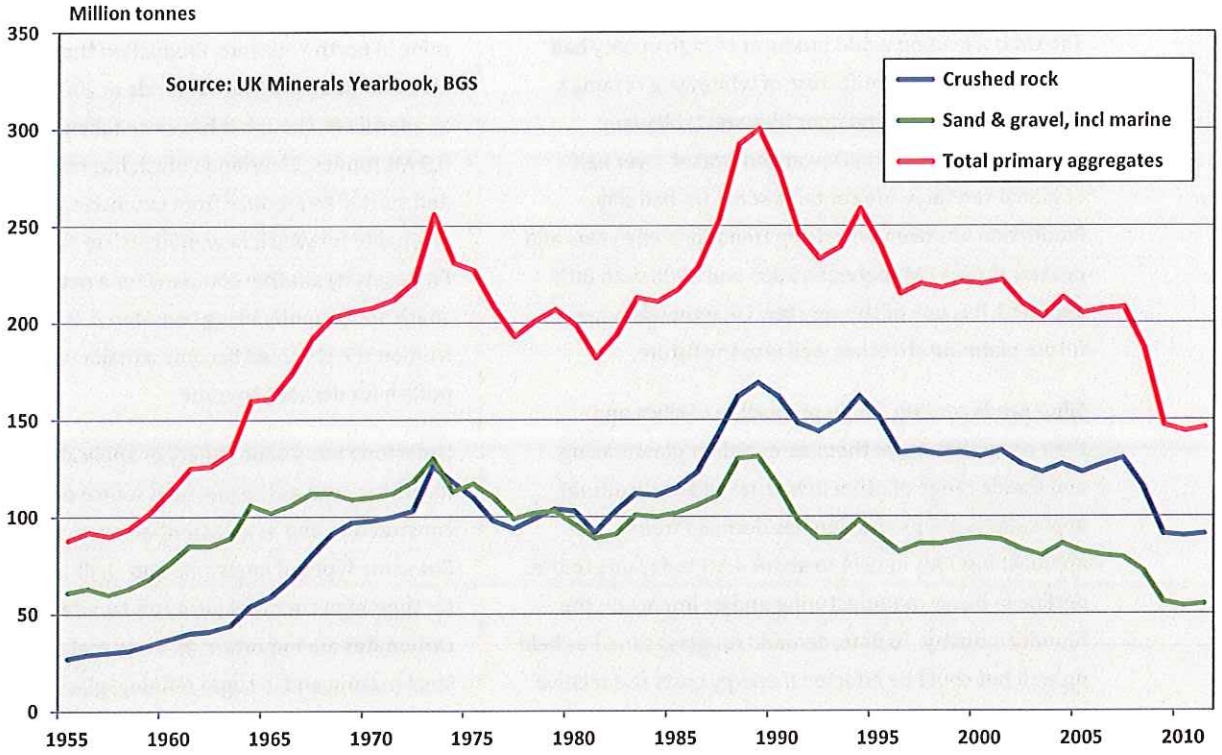
UK: electricity generation by fuel type, 2013

Construction minerals

Aggregates represent the largest material flow in the economy, with some 29% coming from recycled and secondary sources, 5% from marine dredging and the remainder from land-won quarrying of crushed rock (44%) and sand and gravel (22%). The market has declined dramatically since the mid-1990s with the downturn from 2008 taking production to levels not seen since the 1960s (133 Mt primary aggregates in 2012). However, there has been a significant improvement in the aggregates market since early 2013. Aggregates remain the basic raw material for all construction and it is widely accepted that some form of quantitative assessment of future requirements is essential as part of a managed aggregates supply system. There is abundant evidence of a long-term decline in reserves, particularly of sand and gravel, indicating a potential supply issue if production continues to outstrip rates of replenishment.

Brick clay is the essential raw material for one of the most visible elements of the built environment and the UK has large resources. The significant fall in production from 18 Mt in 1974 to some 4 Mt in 2012 correlates with the decline in the manufacture of clay bricks. The initial reduction was due to the advent of blocks to replace bricks in the inner leaf of cavity walls. More recently fewer and smaller houses and increasing use of timber-framed prefabricated construction have contributed. Increasing pressure for new homes driven by population increases should result in an uplift though the full effect on demand for clay bricks remains to be seen. Whilst UK production of bricks has increased since 2012, brick imports are also increasing, reflecting a shortfall in current UK productive capacity. Investment to restore capacity lost during the recent recession will be necessary. This will require a longer term firm market and secure energy at internationally competitive prices.

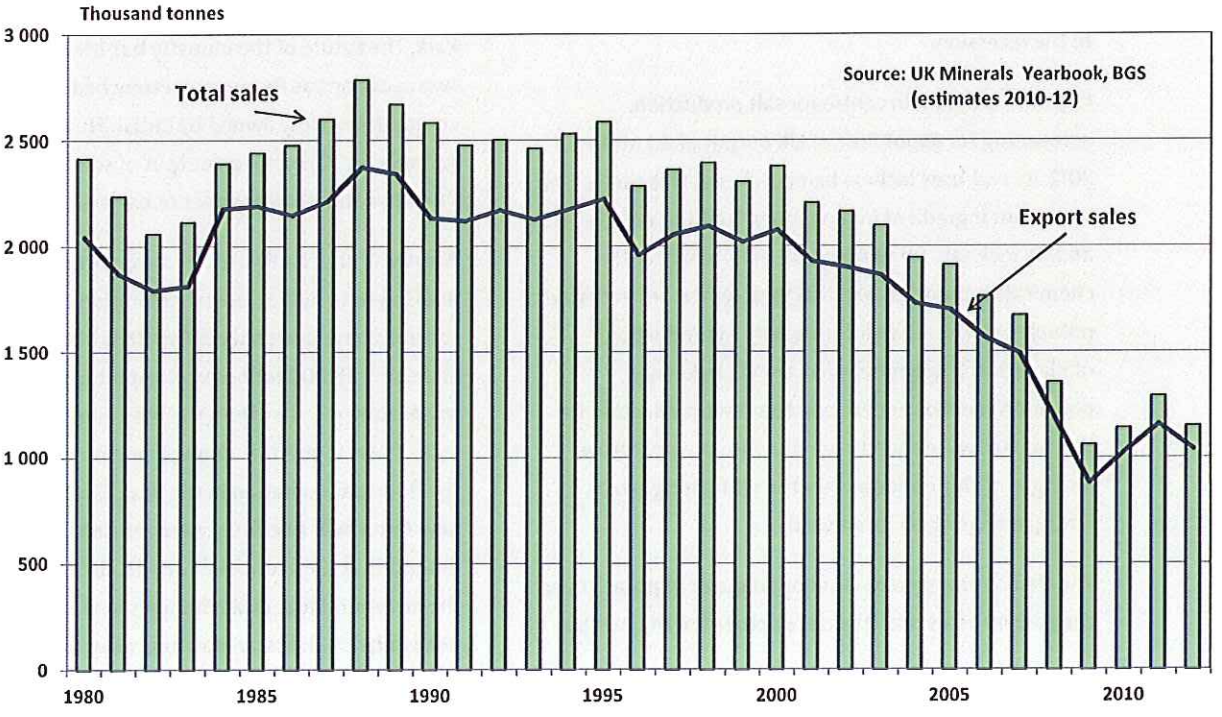
Cement is the essential constituent of concrete and mortar, and is produced by heating together limestone or chalk with clay / mudstone at very high temperatures. Cement production has declined from some 18 Mt in 1974 to around 8 Mt today, due in part to the reduction in concrete-intensive civil engineering projects. Other impacts have come from growth in imports, the introduction of blended cements which use alternative raw materials, and the demise of the more energy intensive "wet" process which used chalk in favour of limestone. The production process is, by its nature, energy intensive but operators have made great strides in reducing CO_2 through the use of alternative waste fuels and secondary raw materials. The industry has been hard hit by the recession but domestic production and imports have increased recently. Cement manufacture could, however, easily be driven overseas by higher energy costs and penalties on carbon emissions, the result being the loss of a secure source of this critically important construction material (and the associated jobs), whilst exporting carbon emissions.



GB: consumption of primary aggregates, 1955 - 2012

Industrial minerals

The UK is the world's third largest producer of **kaolin**, which was previously known as china clay and is produced mainly in Cornwall but also in Devon. Kaolin has for many years been UK's most important mineral export after hydrocarbons. UK production peaked at 2.8 Mt (dry tonnes) in 1988 but has since fallen markedly to about 1.15 Mt in 2012 as the UK's dominant producer, Imerys, consolidated its paper-coating production in Brazil due to lower energy costs. It is a prime example of a major producer being discouraged from continuing UK production by energy costs and taking the option to invest elsewhere.



UK: kaolin sales and exports, 1980 – 2012

The UK is a leading world producer of high quality **ball clays** used in the manufacture of whiteware ceramics - sanitaryware, wall and floor tiles and tableware. Production is located in Devon and Dorset. Over half of global sanitaryware contains some UK ball clay. Production has been on a rising trend for some years and peaked at over 1 Mt between 2005 and 2008 with 80% exported. It is one of the very few UK minerals where future planning stretches well into the future.

Silica sands contain a high proportion of silica and their properties make them essential for glassmaking and a wide range of other industrial and horticultural applications. UK production has declined from approaching 7 Mt in 1974 to about 4 Mt today due to the decline in heavy manufacturing and its impact on the foundry industry. To date, demand for glass sand has held up well but could be affected if energy costs rise relative to those in other countries. Hydraulic fracturing for shale gas/oil could offer a significant new market.

While a mixture of **gypsum & anhydrite** is still used in cement manufacture, production of anhydrite as a source of sulphur for fertiliser and sulphuric acid was brought to an end by cheap sulphur on world markets and the last UK mine closed in 1975. Natural gypsum for plaster, plasterboard and cement making has historically been mainly extracted by mining in the UK, peaking at around 3.7 Mt in 1973 and again in 1988. The amount extracted in the UK has since declined appreciably because of the use of desulphogypsum derived from flue-gas desulphurisation at coal-fired power stations and also due to the recession.

Cheshire is the main centre for **salt** production, accounting for about 80% of UK output of 6.1 Mt in 2012. Its end-uses include being a chemical feedstock, an important ingredient in food manufacture / preservation and, as rock salt, for winter road maintenance. The chemicals it produces are vital to downstream industries, notably chlorine as an intermediate in production of plastics and polymers such as PVC, nylon and polyurethane. Continued long term salt production for this market will depend upon the future competitive strength of this important sector, with energy costs having a bearing on its survival.

The UK has emerged as a major producer of **potash** over the past 40 years with the development of the Boulby mine in north Yorkshire. Production there hit a record 1.04 Mt of refined potassium chloride in 2003 for use mainly as a fertiliser, though it has since fallen back to around 0.9 Mt tonnes. Cleveland Potash has recently accessed and started to produce from extensive deeper reserves of polyhalite for which new markets are being developed. Proposals by another company for a new mine to the south are currently being considered. If the plans come to fruition the UK could become a major world exporter of potash for decades to come.

Limestone has a wide variety of applications in addition to its primary use as the principal source of crushed rock for construction and as an essential raw material in cement. But some types of limestone and chalk are also valued for their high chemical purity and whiteness. **Industrial carbonates** are important as a raw material in iron and steel making and in sugar refining, glass manufacture and numerous chemical processes including flue gas desulphurisation though the latter is tied to coal-fired power generation. Production of industrial carbonates peaked at around 11.5 Mt in the late 1990s, but have gradually declined to around 7.5 Mt in 2012. Most of the markets for industrial carbonates are now mature or in decline due to the decline of UK manufacturing.

Fluorspar is the most important and only UK source of the element fluorine, most of which is used in the manufacture of hydrofluoric acid. Output has declined from 235,000 tonnes in 1975 to 26,420 tonnes in 2010 when mining ceased, recent output coming mainly from the Southern Pennine orefield in the Peak District National Park. The future of the industry has been in doubt on two occasions as its owners retrenched due to foreign competition. Now owned by British Fluorspar, operations resumed in 2013 with an output of some 65,000 tonnes of fluorspar and 10,000 tonnes of barytes.

Barytes is principally used as a weighting agent in drilling fluids used in hydrocarbon exploration to which its fortunes have been linked. The UK is not self-sufficient and some 88,000 tonnes was imported in 2012. The major source comes from the Foss mine near Aberfeldy in Scotland though, as above, some now comes from the fluorspar operation in the Peak District. Plans for a new mine near Aberfeldy were refused in 1996 on the ground that the economic benefits did not outweigh the environmental disadvantages. A world class deposit needed by UK industry may thus never be developed.

Other minerals

The UK has a long history of metal mining including iron ore and a wide range of non-ferrous metals. Iron ore mining effectively ended in 1980 with closure of the works at Corby in Northants. Meanwhile, UK's last tin mine in Cornwall closed in 1998. The UK does still however, continue to attract interest in metallic minerals and a tungsten-tin deposit near Plymouth which was previously worked in the last war is currently being revived with production starting in 2015. Two small **gold** operations are now in operation at Omagh in Northern Ireland, and plans for another in Scotland have been delayed due to volatility in gold prices. Minor production of **lead** has accompanied the fluorspar production in the Peak District.

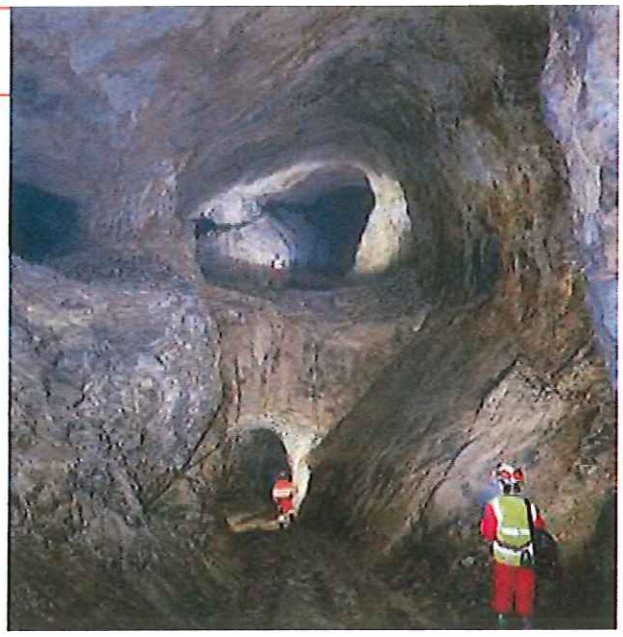
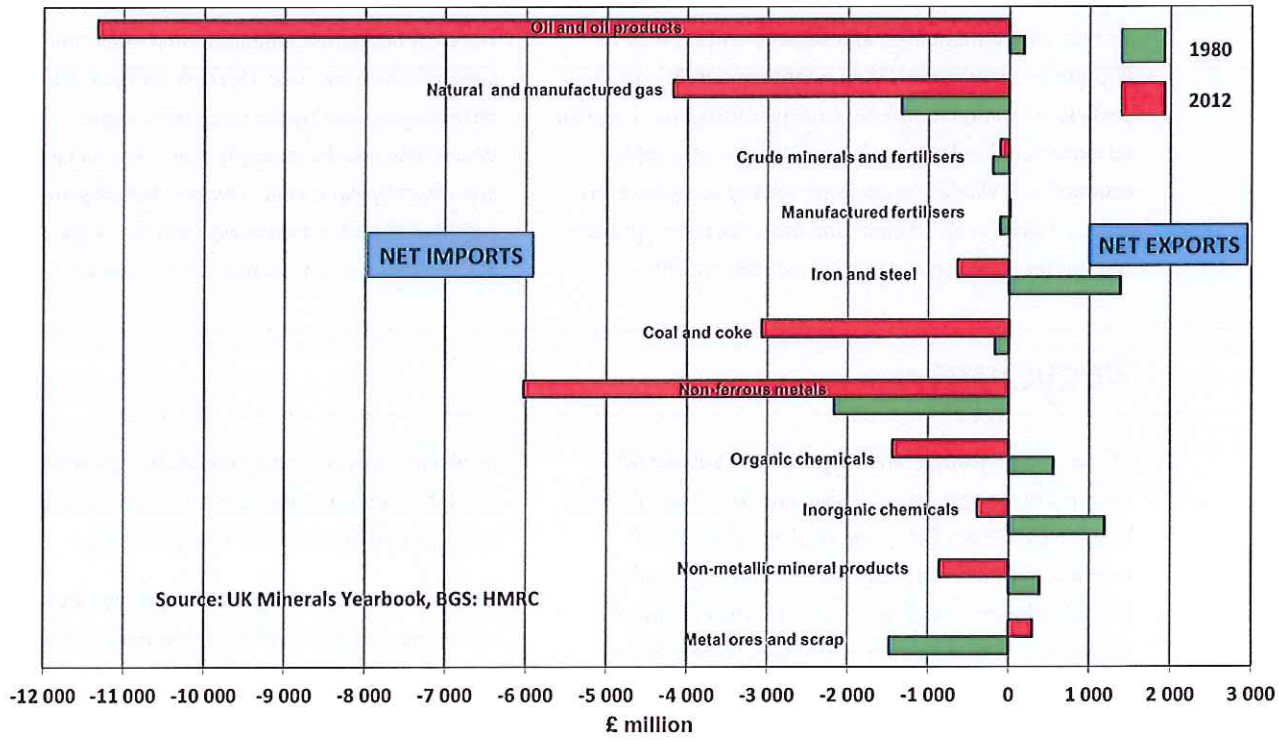


Photo: Paul Deakin. © M-I Drilling Fluids UK Ltd

Foreign trade

UK has become increasingly dependent upon imports of minerals and minerals-based products, particularly energy minerals and metals. The switch from being a long-term net exporter of energy minerals to a major importer has been particularly rapid, a trend that will not be reversed. Metal ores and scrap is one sector in which the balance of trade has improved, possibly due to improved recovery and recycling of secondary metals coupled with a decline in suitable home facilities to process them for domestic use. Other concerns about security of supply rest on energy minerals and also on more exotic metals, such as rare earths, where production is confined to a few countries such as China.



UK: balance of trade in minerals and minerals-based products, 1980 – 2012 (constant 2013 values)

ISSUES

Need

Adequate and resilient supplies of minerals are essential to the future of the UK and pivotal to the growth of the economy and the well-being of the population. Without them we would have no energy and no materials from which to build our homes and infrastructure. Minerals are also fundamental to the manufacture of a wide range of industrial and consumer goods, and provide the means for improving the fertility of our farmland for food production.

While an expansion in renewable energy, increased use of recycled materials and industrial by-products, and improved resource efficiency all have key parts to play in the years ahead, there will be a continuing need for newly-extracted minerals.

Internationally, the UK is facing increasing global competition for raw materials driven by the growing world population, rising incomes and expectations. In the global economy, mineral supply cannot be guaranteed and may become more challenging through increasing geopolitical uncertainty and the risk of supply disruption. At home, population and household growth, infrastructure renewal and the need to improve resilience and adapt to climate change will continue to be important drivers for minerals.

Resources

The varied geology of the UK and its continental shelf has contributed much to our national wealth throughout history. Our land mass may be small but we are fortunate that it has an abundance and diversity of indigenous mineral resources.

They are valuable national assets which can only be worked where they occur, and sometimes that may be in protected landscapes. The fact that minerals exist in a particular location is, however, no guarantee that they can be extracted. The latent value can only be released if it is economically viable and environmentally acceptable to do so and if there is an efficient and proportionate regulatory process for planning and environmental consents.

While oil and gas and construction minerals now dominate in terms of tonnage and value, domestic coal production still makes an important contribution to our energy mix. Many of the UK's minerals also support downstream, value-added industries and some also serve important export markets.

The UK is nevertheless deficient in metallic minerals, some of which are critical for new digital and low-carbon technologies, notably the rare earths found in China. We are also now increasingly short of oil and gas and economically viable coal. However, the UK's mineral potential still attracts interest, with the ongoing evaluation of the nations's shale hydrocarbon potential.

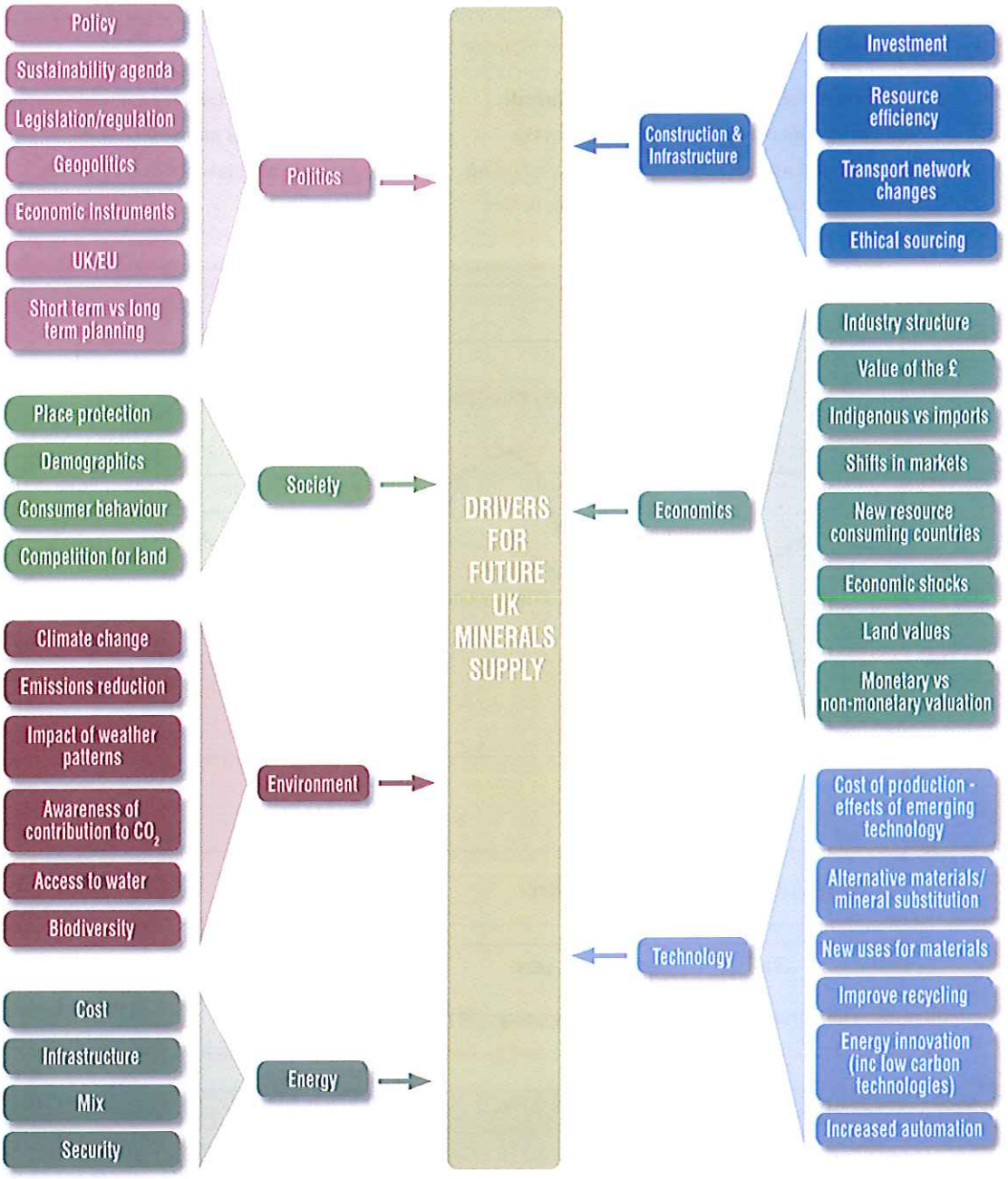
Recycling

Re-use and recycling is an integral part of sustainable resource management and improving resource efficiency. While the UK leads Europe on the level of its use of recycled and secondary aggregates, recycling is more difficult where minerals are valued for their chemical properties e.g. there are no alternatives to potassium-bearing minerals as an essential in plant nutrient.

While most properties of metals are not destroyed in use and can be recycled, a particular challenge arises with the lack of suitable reprocessing facilities in the UK which results in many secondary metals being exported for re-use. Integrated supply chains that include recycling can be an important element in security of supply.

There are also some security of supply issues with secondary materials with question marks, for example, over the long-term availability of blast furnace slag from iron making and pulverised fuel ash (from coal-fired power stations) which are both used in blended cements, and notably desulphogypsum from coal-fired power stations.

Drivers of demand

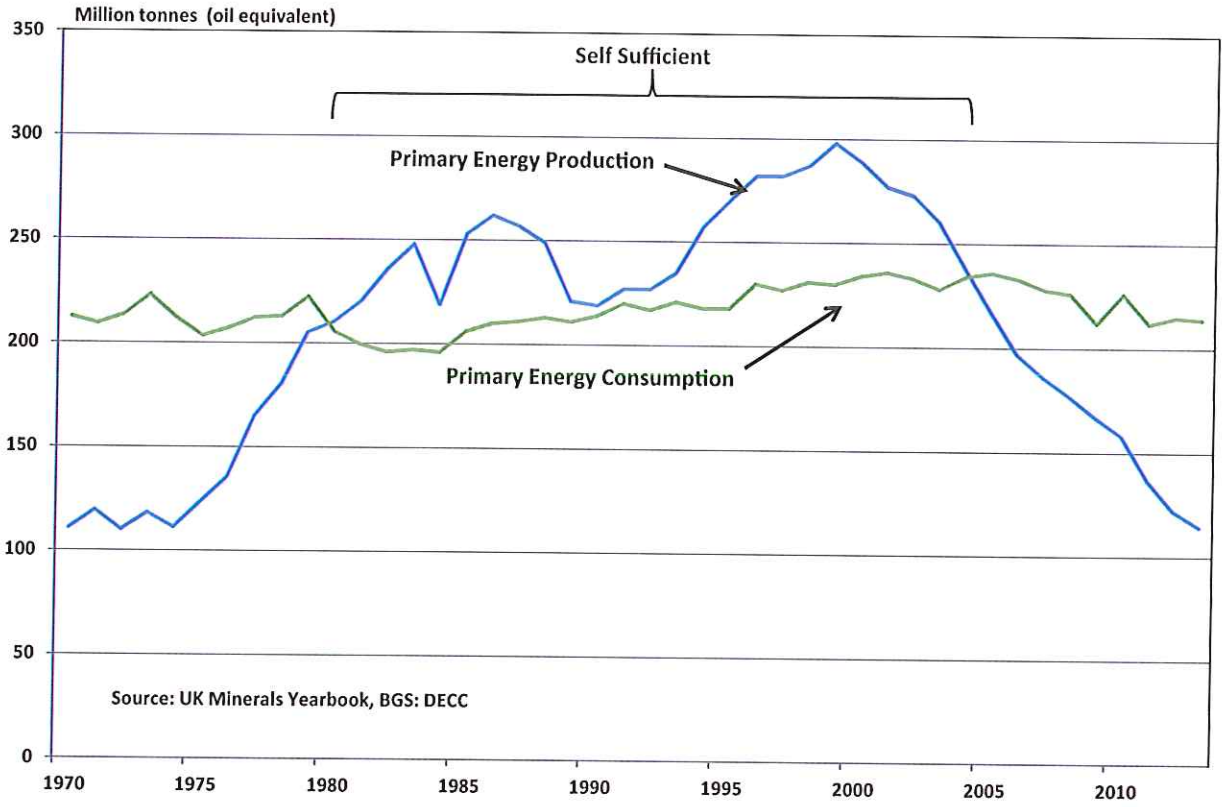


UK: drivers for future minerals supply

Future demand for minerals and the products that come from them will be affected by a number of external factors. Major drivers of change include:

- **Growth in the economy** – while there remain uncertainties, there are predictions that the longer-term outlook for the UK is favourable and by 2060 it is forecast to have the largest population in Europe;
- **The security and cost of energy supplies** – energy underpins a successful economy but the UK has moved rapidly from energy self-sufficiency and surplus to increased reliance on imports of oil, gas and coal. The need for secure and resilient supplies cannot be overstated;
- **Future investment** in construction and infrastructure – it is now recognised that successive governments have under-invested with a detrimental effect on economic growth. Much now depends upon implementation of the National Infrastructure Plan and on investment in flood and coastal protection and responding to the needs of population growth;

- **Evolving technology** – improvements aimed at extracting materials with reduced impact, improving existing operations, creating resource efficiencies, extending materials substitution and reducing energy costs must be a continuing feature of the industry;
- **The balance between the benefits of minerals extraction and the associated impacts on the environment and society** – the difficulty in finding environmentally acceptable mineral sites occurs nationwide but the industry has a good reputation for restoration and an ability to create new landscapes that are of value. Importing minerals transfers the impacts of extraction and carbon emissions to other countries.
- **The political (and regulatory) framework within which the minerals industry operates** – a clearly defined and stable minerals policy is essential.



UK: production and consumption of primary energy, 1970 – 2013

(Production includes biofuels and renewable energy: consumption excludes embedded energy contained in UK imports).

Impression: EDF Energy

Minerals have a major role to play in EDF Energy's planned new nuclear plant at Hinkley Point in Somerset.

GROWTH SCENARIOS FOR 2050

Our assessment is based on differing influences on three potential scenarios from the geo-economic landscape, the geopolitical landscape, the economic outlook and the environmental outlook.

1: Green UK - taking a decisive and ambitious approach to the environment

Under this scenario cyclical growth would be low with some stagnation. While pushing for free markets and open borders, there would be some political instability.

Self-sufficiency in minerals would be maximised, with recycling maximised in order to lower consumption of primary minerals. Careful and strategic management would be required to ensure a supply of minerals with focused policy and regulation. Energy intensive industries would tend to go into decline.

With the industry facing increased costs and competition, UK production would reduce as imports flowed in. Energy generation would face challenges with the prospects of gaps and blackouts. Government would face a difficult transition while for the population, the cost of living would increase with more Government control and less choice.

On the positive front, some export opportunities would increase and society would enjoy a sense of shared purpose.

2: UK powering growth - operating within free markets and open borders generating strong cyclical growth

Free markets and open borders would generate strong cyclical growth and the economy would be the largest in Europe. While the nation would be geopolitically stable, short termism would prevail with a progressively reactive approach to environmental issues.

Demand for minerals would increase and whilst it would be undertaken, there would be less of a drive towards recycling. Supply would be market driven and governed by cheapest price, security of supply would be fragile. While there would be no overall strategy for mineral and energy supply, energy intensive industries would tend to grow.

The risks of this scenario would be that barriers to production would increase. Infrastructure would be weaker and public response would be unfavourable, posing political challenges for Government to maintain the status quo. Environmental risks would increase as would individualism, with resulting society tensions.

Strong demand would, however, mean big rewards with plenty of funding to build a stronger society.

3: Insular UK - resource security overrides other issues, maximising use of domestic resources

Under this scenario the UK would face economic stagnation and volatility with geopolitical instability due to controlled markets and closed borders. Resource security would override other issues with the state maximising use of domestic resources and an increasingly reactive approach to the environment.

The UK would be required to maximise self-sufficiency in minerals, with high levels of recycling efficiency and policy needed to optimise production of indigenous minerals. Security of supply would, as a result, be fragile. Government would be under-resourced and often in fire-fighting mode, with no public participation in planning. Energy-intensive industries might stabilise or decline.

With investment reduced and declining demand, production would be compromised and exports reduced. The UK would be politically and economically isolated with social unrest and challenging demographics. Quality of life would fall, with a sense of insecurity as the UK became marginalised.

On the positive side, markets might become more predictable with opportunities for increased production. Government would have greater control over resources, and communities might feel more empowered as the UK became more self-reliant.

CONCLUSIONS

A steady and resilient supply of minerals is essential (rather than optional) to support the UK economy and the lives of the UK population in the years to 2050. While renewable energy, recycling and resource efficiency all have an important part to play, there will be a continuing need to extract primary minerals. We have to plan more effectively than in the past to make that possible.

Globally, the UK will face increasing competition for raw materials as populations, incomes and expectations all rise. But in a global economy supply cannot be guaranteed and access will be more challenging. Geopolitical uncertainty is likely to be an issue as will the risk of supply uncertainty due to the concentration of some important minerals in specific countries such as China.

Closer to home, there is uncertainty about our relationship with the EU which could impact on mineral prices and availability. This in turn may affect future investment in the minerals supply chain, particularly as the UK's minerals sector is now largely foreign owned and able to divert investment elsewhere.

The UK is not self-sufficient in a number of key minerals, notably metallic minerals and increasingly energy minerals; oil, gas and economically viable coal. The future potential to access unconventional fuels in the UK, notably shale gas, is as yet unknown and requires significant further investigation.

However, the UK has adequate resources to sustain the economic production of many non-energy minerals and their downstream products, particularly for construction use, to 2050 and beyond. Long-term access to supplies of these materials is crucial if we are to achieve sustainable economic growth and rebalance our economy more towards production and manufacturing. While population and household growth is driving the need for more homes, we also need to renew our infrastructure, develop low carbon power generation and enhanced flood protection. We must also resolve the apparent conflict between energy and carbon pricing policies that may discourage investment in the products we need to meet these objectives whilst exporting our carbon footprint (and jobs) elsewhere. Responding to these drivers will be a matter of national urgency over the 35 years to 2050.

The need to access minerals must, however, be balanced against the adverse impacts on the environment. So far, the UK has generally been able to maintain adequate and steady supplies of the minerals it needs within a highly protective environmental framework. It is hoped that this will continue to be the case over the period towards 2050.

All the stakeholders involved in UK minerals extraction - industry, environmental organisations, central and local government and the other regulators - need to work together in taking a long-term view of future minerals supply, by contributing to the development of a minerals strategy as an integral part of the UK's wider industrial strategy.

The £15 billion Crossrail project is set to revolutionise travel in London.

Photo: Crossrail Ltd

RECOMMENDATIONS

The work of the UKMF has reached a point where we believe we are in a position to make five key recommendations about the future of minerals in the UK:

1 Create a national long-term vision and strategy for UK minerals supply as an integral part of the UK's future industrial strategy

The minerals industry wants to work with policy makers and other stakeholders to develop a strategy that acknowledges future risk and uncertainty and sets a broad framework for future minerals supply.

2 Take concerted action to help policy makers and the public understand the importance of minerals supply to the economy and to society

The nation needs policy and legislation that responds to social, environmental and economic change through enabling the long term production and supply of minerals. While accepting the need for minerals in principle, many people are unwilling to accept the reality of mineral working and fail to recognise the diverse benefits obtained from high quality restoration.

3 Ensure effective review and monitoring by all parties in delivering an agreed minerals strategy and adjusting it in response to emerging events

It is important that Government and its agencies have access to high quality, impartial information in order to facilitate foresight and endorse future decision-making. Government, regulators and the industry must all contribute and react as events intervene and new trends emerge.

4 Continue collaboration between Government and industry to deliver the vision that is developed.

The industry is ready to play its part. Government in turn must develop its own capacity and expertise and respond with sustained data collection, monitoring and, where necessary, adjustments to regulation, taxation and other policies.

5 Boost the resilience of the UK minerals industry

The strategy and subsequent policy framework needs to enhance and support the industry's resilience to adapt and survive.

UK Minerals Forum
CBI
Cannon Place
78 Cannon Street
London EC4N 6HN
http://www.bgs.ac.uk/ukmf/home.html

Front and back cover insert photos courtesy British Marine Aggregate Producers Association, British Lime Association, D B Schenker Rail (UK), GPS Marine, Hufton & Crow, IGas Energy, Imerys, Mineral Products Association, Mortar Industry Association, Silica & Moulding Sands Association.

UK Minerals FORUM

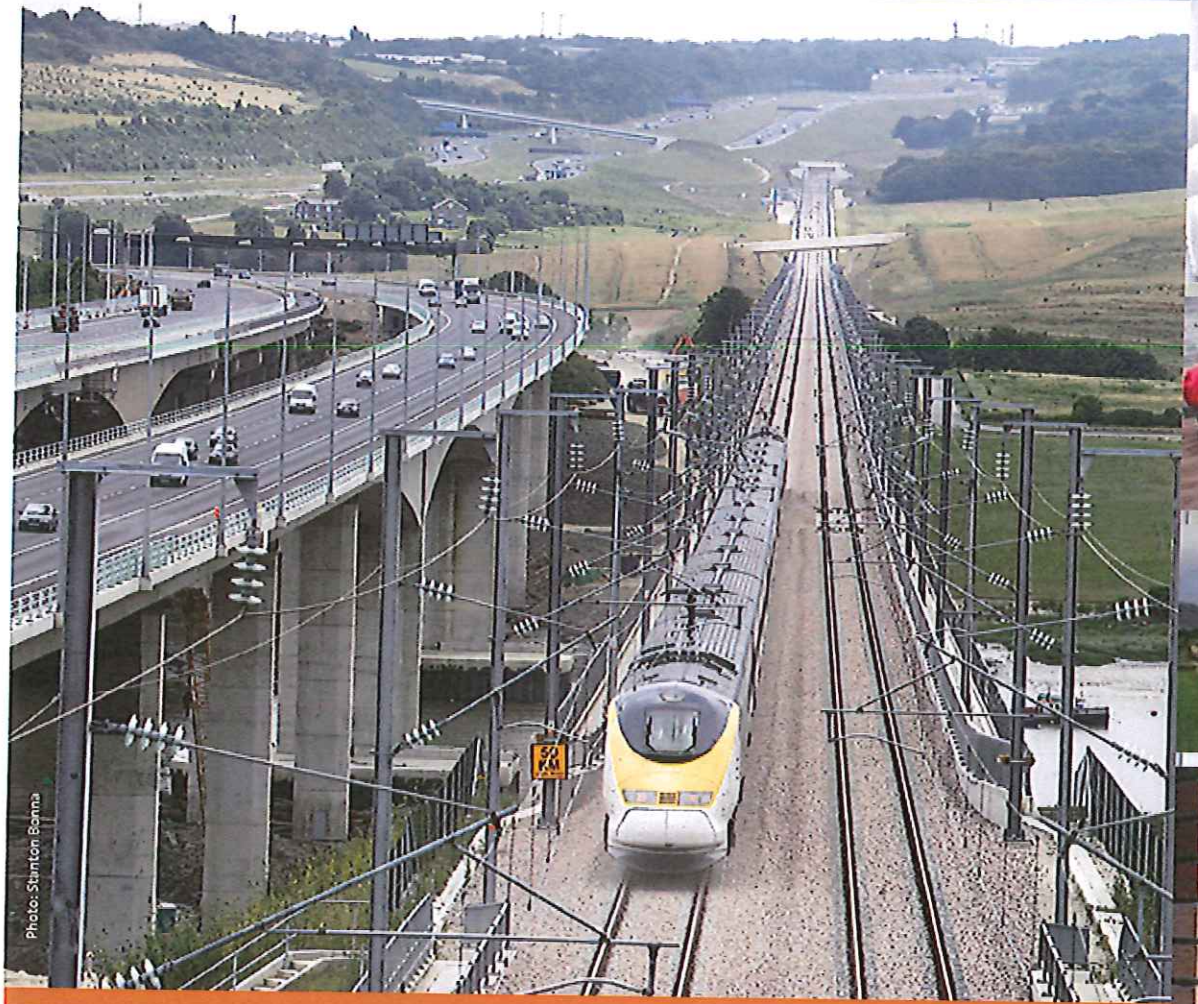
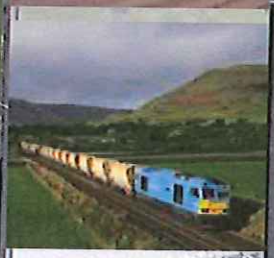
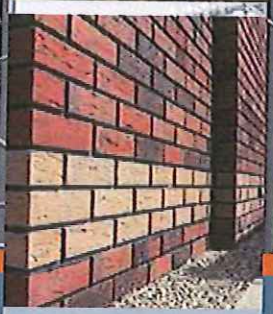


Photo: Stanton Bonna





[redacted]

From: Gordon Best [gbest@qpani.org]
Sent: 21 November 2014 10:15
To: [redacted]
Subject: FW: Significance of Minerals in the economy and their future
Attachments: MPA Minerals Flow Chart v5 201114 final.pdf; UK Minerals Forum FINAL.pdf

[redacted]

This may be of interest.

Gordon

From: Nigel Jackson [mailto:Nigel.Jackson@mineralproducts.org]
Sent: 21 November 2014 09:15
To: [redacted]
Subject: Significance of Minerals in the economy and their future

Colleagues,

I thought you should be aware of these 2 new and significant publications which MPA have been instrumental in producing with colleagues in the UK Minerals Forum and which were launched at the Living with Minerals 5 conference on Monday.

The first is a chart which maps the full extent of the role minerals play in the economy and supply chains and shows how:

- the **GVA** of **Extraction at £1.6Bn pa** magnifies to **£27.5Bn pa in Products** serving **Markets of £188Bn pa.**
- the **Turnover** of **Extraction at £5.3Bn pa** magnifies to **£81.Bn pa in Products** serving **Markets of £535.3Bn pa.**

The second document is 'The future of our Minerals' which is a key component of the work we are doing in the CBI Minerals Group in developing a UK MInerals Strategy. The full reports are on the UKMF website which MPA will be hosting and supporting from next year.

Please share these outputs with your colleagues and if you have any questions please do let me know.

Kind regards

Nigel Jackson

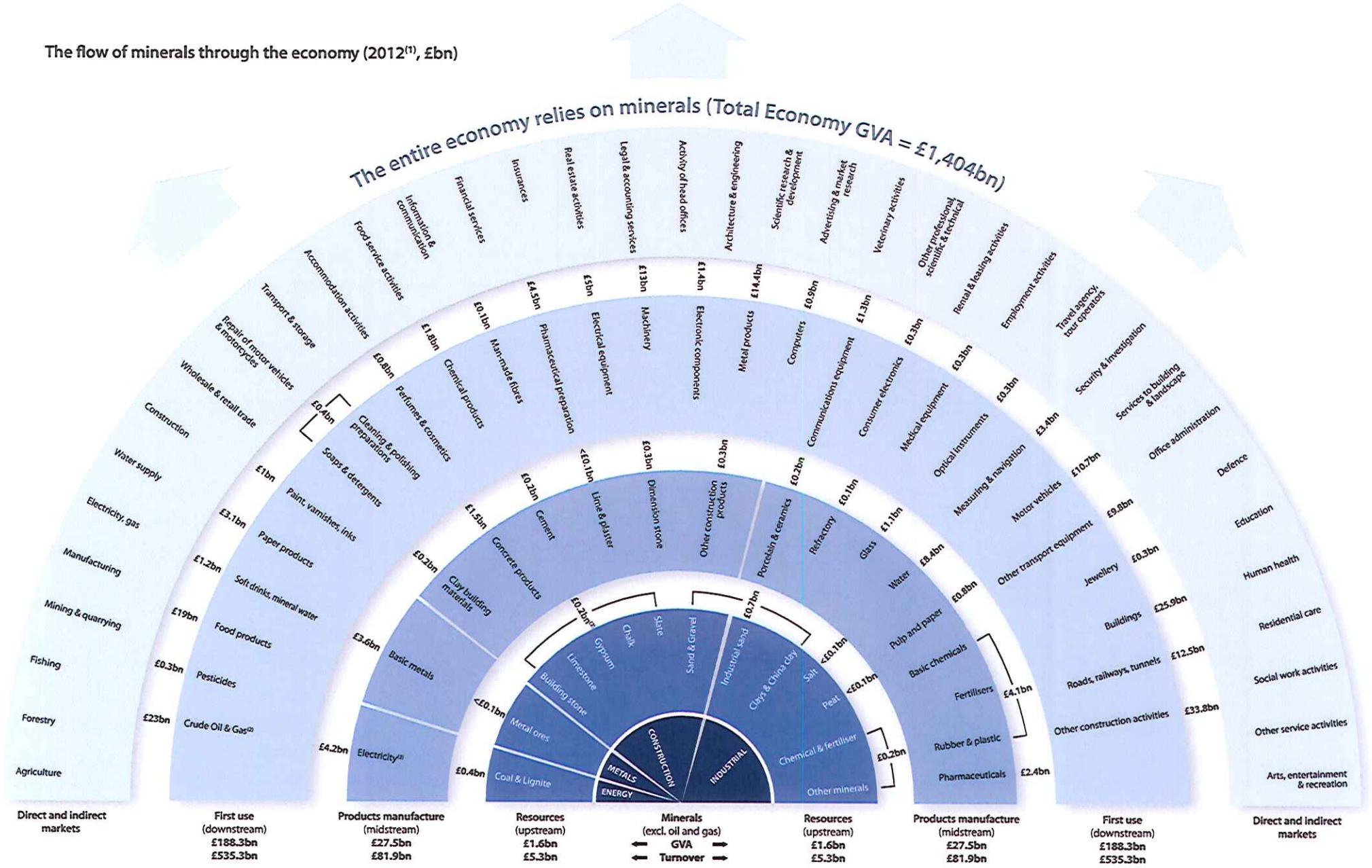
Chief Executive

Mineral Products Association

38-44 Gillingham Street, London, SW1V 1HU

T 020 7963 8000 **F** 020 7963 8001
W www.mineralproducts.org

The flow of minerals through the economy (2012[1], £bn)



Notes: [1] Where data is not available, GVA estimates were extrapolated. Official GVA data in the Annual Business Survey covers two thirds of the economy, accounted for the UK non-financial business economy. Our total economy GVA estimate therefore extrapolates the data to achieve a UK total.
[2] Includes mining support activities. [3] Covers only the production or manufacture stage, not the distribution or any other associated services.
Source: Annual Business Survey - 2012 Revised Results.

Prepared by the Mineral Products Association for the CBI Minerals Group

[redacted]

From: Gordon Best [gbest@qpani.org]
Sent: 16 October 2015 16:11
To: [redacted] (DETI)
Cc: McCormick, Andrew (DETI)
Subject: FW: QPANI Weekly News Update: Friday 16 October 2015

[redacted]

Please see article on our meeting this week with Planning Service re Mineral Planning Training for DOENI and Local Councils.

Gordon

From: [redacted]
Sent: 16 October 2015 15:55
To: [redacted]
Subject: QPANI Weekly News Update: Friday 16 October 2015

View in your browser

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6 October 2015

Issue 37/2015

vents: 3 December - Local Member Forum, Armagh City Hotel

S UPDATE

o meet with Exchequer Secretary to the Treasury
nd IoQ Meet with Senior Planning Officials
subscribe to the IMQS Annual Review 2015
trike Avoidance seminars hear call for better information
ive Finance Seminar Opens Minds
ank Economics Article

with Exchequer Secretary to the Treasury

has been invited to attend a cross party meeting with Damian Hinds, Exchequer Secretary to the Treasury, on Tuesday 3 Novemb
eting has been called to discuss the ongoing problems being created by the Aggregates Levy in Northern Ireland and to give the c
our members' frustrations at the ongoing, seemingly unending, legal merry go round.

will seek assurances from the Treasury that the specific issues affecting Northern Ireland, namely the levy impact on the import ar
cts, can and will be addressed sooner rather than later despite the ongoing BAA legal challenge. We will also put across our view
small independent operators across the UK and that we in no way support their legal challenge that has only brought misery and
in Northern Ireland. We also believe that a UK wide solution is the only long term sustainable option to protect the viability of the
dustry and that we want to see a significant restructuring of the levy, and if possible its scrapping, and replacing with something th
neasurable positive outcomes for the Industry and the Communities in which we operate.

*mental training gap within the industry for Mineral
conjunction with Mineral Planners have developed a
ng programme, underpinned with high quality online
d supported with a one day face-to-face workshop &
site visit.*

QPANI and IoQ Meet with Senior Planning Officials

This week the Regional Director facilitated a meeting between Phil James and Julian Smallshaw of the Institute of Quarrying (IoQ) and senior officials from the DOENI Plar Service to discuss the rolling out of the new IoQ "Mineral Planning for Mineral Planne qualification (click here) for DOENI and the new 11 local council planning staff.

The meeting was extremely beneficial with Planners recognising the benefits adoptior new qualification would bring not just for the DOENI and Councils but for the Industry wider economy and environment. Planning Service is now going to convene a joint m with Senior Planners from the local councils, QPANI and IoQ to discuss a programme delivering the qualification.

The thought of having a qualified mineral planner in DOENI Strategic Planning and in our new 11 local councils is exciting and would be the biggest step forward for the Ag and Minerals Industry in NI for years.

pe to the IMQS Annual Review 2015

rector has again written a 'Northern Ireland Update Report' for our colleagues in the IMQS.

k below to a low resolution version of the review which you can download to your computer or circulate to colleagues
om/s/prtxx5nbzkls2giatz0bhtuekke95zto

on is also available on the Home page of the website www.imqs.ie.

Utility Strike Avoidance seminars hear call for better information

This week's Utility Strike Avoidance Seminars held at Nutts and attended by over 100 industry professionals heard call better information on the location and depth of utility servic

The Seminars highlighted the positive work that is going or Utility Service owners and Contractors but recognised ther much unfinished work to do.
It was agreed that regular contact is now needed and this v done through the QPANI and the NIRAUC Health and Safe Practitioners Group.

Use the links below to view the presentations from the sen

S- Emmet McFadden

NIRAUC presentation- Ruadhrai O'Kane

Natural Gas Distribution Netw NI

Kevin McDowell

What the Law says- Nancy Henry, HSENI

The Contractors Perspective-

uired for successful service avoidance- Bob Cummins

nce Seminar Opens Minds

ttended lunchtime Alternative Finance seminar certainly gave members an insight into what pathways are available to access fina gh the traditional banking route.
s Finance article click here.
nload the Keys Finance presentation click here.

›nomics Article

[›pest rise in output for 11 months
2015 Survey Update](#)

Plant & Civil Engineering Awards - Enter Now!

The 23 October 2015 is the closing date for entries for The Plan Engineer Awards 2015. Please return the appropriate entry form link below for consideration by the Judging Panel.

The Plant & Civil Engineer Awards ceremony takes place on Th November 2015.

ENTER NOW!
Click here for more information on entering this year's Plant, Co and Quarry awards 2015

eed to familiarise yourself with
s & services provided by our
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Quarry Products Association Northern Ireland, Unit 10 Nutts Corner Business Park, Dundrod Rd, Crumlin, County Antrim BT29 4SR
Web: www.qpani.org E-mail: info@qpani.org Tel: +44 (0) 28 9082 4078 Fax: +44 (0) 28 9082 5103

[redacted]

From: Gordon Best [gbest@qpani.org]
Sent: 17 February 2016 08:51
To: [redacted]
Cc: [redacted]
Subject: FW: Minerals Training in NI

[redacted]

See email below. Very positive news re the uptake of the Institute of Quarrying Mineral Training by the local Councils.

Must meet up with you soon to discuss Industry issues in particular our support for a Northern Ireland Land Strategy.

Let me know what date and time would suit you.

Gordon

From: [redacted]
Sent: 04 February 2016 21:54
To: Gordon Best
Subject: Re: Minerals Training in NI

Gordon

Yes agree absolutely. I haven't heard off [redacted] yet.

Regards

[redacted]

Head of Educational Development
Institute of Quarrying
Sent from an iPhone 6

On 4 Feb 2016, at 20:20, Gordon Best <gbest@qpani.org> wrote:

[redacted]

This is very positive news. Has [redacted] been in touch?

Gordon

Sent from my iPhone

On 4 Feb 2016, at 16:12, [redacted] wrote:

[redacted]

Great. Yes looks like we are almost there

Thanks for your help

I'll be in touch shortly

Regards

[redacted]

Head of Educational Development
Institute of Quarrying
Sent from an iPhone 6

On 4 Feb 2016, at 14:23, [redacted] wrote:

[redacted]

Further to our recent meeting regarding the attached training course I have contacted the Planning Managers within the other Councils.

[redacted] from Causeway Coast and Glens Borough Council has advised me that she wishes to train two of her staff and I understand that she has already made you aware of this.

I have also spoken with [redacted] of Lisburn and Castlereagh City Council and she has indicated an interest in training four of her staff. She will be in contact with you directly on Monday to advise you of this.

I do expect to get some further positive feedback from other Council's and I will update you when I get it . In the interim, with Mid Ulster wishing to train 8 staff and the interest from two other Councils I presume there are sufficient numbers (14) to now move forward with organising this training for Northern Ireland. Perhaps you could advise me on the likely timescale to get the training rolled out here and what needs to be agreed to do this.

I am happy to discuss this further should you wish to.

Many thanks

[redacted]
Planning Department
Mid Ulster District Council

Planning Department
Mid Ulster District Council
Magherafelt Office
50 Ballyronan Road
Magherafelt
Co Derry
BT45 6EN

[redacted]

Email: [redacted]

<image001.png>

<MineralPlanners_JSmFlyer_Nov2015.pdf>

[redacted]

From: Gordon Best [gbest@qpani.org]
Sent: 17 September 2015 13:52
To: [redacted](DETI)
Subject: FW: Mineral Planning Training from the Institute of Quarrying
Attachments: mineralplannersflyer_july2015.pdf

[redacted]

For your information.

Gordon

From: Gordon Best [mailto:gbest@qpani.org]
Sent: 16 September 2015 12:45
To: [redacted]
Subject: Mineral Planning Training from the Institute of Quarrying

[redacted]

Hope you are well. I just wanted your opinion on the attached mineral planning training course.

Would this be something of interest for the new local Councils? If there was interest I am sure the Institute would be willing to run a number of courses here in Northern Ireland.

Happy to discuss.

Regards
Gordon Best
Regional Director QPANI

Office TelE. 02890824078; fax 02890825103; [redacted] email gbest@qpani.org ; website www.qpani.org ;

QPA Northern Ireland
Providing Essential Materials

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Filling the fundamental training gap within the industry for Mineral Planners. The IQ in conjunction with Mineral Planners have developed a new blended training programme, underpinned with high quality online learning content and supported with a one day face-to-face workshop & site visit.

Course Details

Comprised of a core unit "Mineral Planning for Mineral Planners", the online programme provides an understanding of this intricate subject area, with additional complimentary unit content including:

- Restoration Techniques
- Environmental Awareness
- Environmental Impacts of Blasting
- A Quarry Geotechnical overview

Supplementing the distance learning materials, the programme also delivers a half day tutorial by an experienced Mineral Planner followed by a site visit later that day, further broadening the learning experience.

Further Information

Commencing September 2015, the programme costs £370+VAT per person and additionally provides 30 hours of accredited CPD through the Institute.

To find out more, or to confirm your place contact Julian Smallshaw on 07870 737 645 or Julian.Smallshaw@quarrying.org

IQ
The Institute of Quarrying

Mineral Planning for Mineral Planners

IQ 30 hours ACCREDITED CPD

[redacted]

From: Gordon Best [gbest@qpani.org]
Sent: 02 March 2016 12:28
To: [redacted] DETI)
Cc:
Subject: FW: Mid and East Antrim Minerals Position Paper.

[redacted]

Any assistance you could give me in answering some of the questions below would be greatly appreciated.

Gordon

From: [redacted]
Sent: 02 March 2016 11:50
To: GBest@qpani.org
Subject: Mid and East Antrim Minerals Position Paper.

[redacted]

Hello Gordon

I have been given your name from planning colleagues in other Council Areas as the contact regarding facts and figures in the Quarry world!

I have analysed the Mid Ulster and Fermanagh/Omagh papers and am aware of the type of information they provided to their respective Planning Committees.

[redacted]

Would you be available to meet with myself and my line Manager [redacted] over the next week or two to discuss what we both want from this paper? I have read the QPANI document 'Delivering for the people of Mid and East Antrim' as well as various DETI Statements and have compiled the following list of questions. Would you be so kind as to direct me where to find such information? In some instances the most recent DETI information I could find was 2010/2011?

1. Is there up to date information available on mineral extraction figures/rates, mineral supply in the existing quarries and mineral reserves for Mid and East Antrim Borough Council Area ?
2. Where in MEA is high level quarrying ongoing?
3. Are there any proposed or ongoing short term operations (less than 15 years) in MEA?
4. What are the most recent figures of mineral prospecting licences issued by DETI from 2007-2015 for NI/6 counties/11 councils ?
5. How many are re-applications?
6. How many active mineral prospecting licences are there currently within 11 councils/ 6 councils?
7. Are there regionally important resources within MEA and where?
8. Are there associated companies creating employment? E.G Is there any concrete production or businesses for manufacturing of quarrying or screening equipment in MEA?
9. What is the most up to date list of Quarrying companies and quarry sites in MEA?

10. Have you figures for the amount of tonnage of aggregates produced each year in NI/6 counties/ 11 councils?
11. What is the monetary value of aggregates for in NI/6 Counties/11 Councils?
12. What are the most recent employment figures in the quarrying industry for NI/6 Counties/11 Councils?
13. What amount of minerals are required over the Plan period up to 2030?
14. What percentage number of quarries and pits in NI located in areas of targeted social need.?
15. How many and if possible where are any abandoned quarries within MEA?
16. What is the total turnover from the Quarry and Quarry Products Sector in Northern Ireland? How much of the GDP does this equate to? (GSNI)
17. Which mineral resources in the Borough are of economic or conservation value?

Sorry to land this on you. Im hoping most of the information is the same as that provided for the most recent Mid Ulster paper to minimise your efforts!

Thanks in advance

Mid and East Antrim Planning Department

County Hall

182 Galgorm Road

Ballymena