



# The Mineral Products Industry at a Glance

2016 Edition

# Contents

Page



Welcome to our 2016 edition of The Mineral Products Industry at a Glance. Our aim in this review is to provide you with a valuable source of information on the Mineral Products Industry, documenting the changing patterns in the way we produce and consume our minerals and the manufactured products derived from them. We present a detailed analysis of the latest data for each product, and highlight the significant contribution our industry makes to the UK economy from over 2,000 active sites and plants.

I very much hope that you find this issue interesting, and I welcome your feedback.

**Nigel Jackson**  
Chief Executive

1	<b>At a glance</b>	1 - 2
2	<b>An essential industry</b>	3 - 5
	2.1 Mineral production	
	2.2 Gross Value Added (GVA)	
	2.3 Productivity	
3	<b>Mineral product profiles</b>	6 - 15
	3.1 Aggregates (crushed rock, sand & gravel)	
	3.2 Cementitious	
	3.3 Ready-mixed concrete (RMC)	
	3.4 Precast concrete	
	3.5 Lime	
	3.6 Asphalt	
	3.7 Mortar	
	3.8 Dimension stone	
	3.9 Industrial sand	
	3.10 Slag	
4	<b>MPA markets outlook</b>	16 - 17
5	<b>Long term aggregate supply</b>	18
6	<b>Taxation</b>	19
7	<b>Environment and sustainability</b>	20 - 23
	7.1 Recycling	
	7.2 Resource efficiency	
	7.3 Carbon emissions	
	7.4 MPA National Nature Park	
	7.5 Sustainable development reports	
	<b>About the MPA</b>	24
	<b>MPA members</b>	25 - 28

## MPA Agenda

- Economic conditions that support investment
- Better Government support for an essential industry
- A reasonable "licence to operate"
- Proportionate legislation and regulation
- Recognition of progress

# 1 At a glance



**360mt**

GB production of aggregates and manufactured mineral products



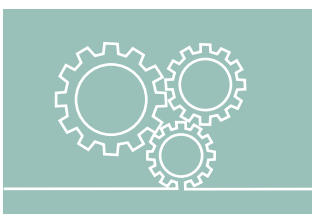
**£20bn**

Annual turnover



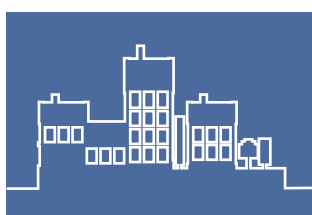
**£6.4bn**

Gross value added of our industry



**£495bn**

Turnover of industries we supply



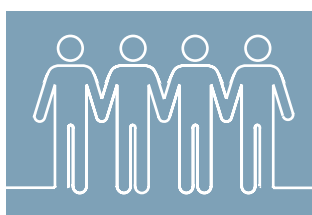
**£144bn**

Value of construction, our main customer



**78,000**

People directly employed in our industry



**3.4m**

Jobs supported through our supply chain

## 1.1: GB sales of minerals and mineral products in 2015

(unless otherwise stated)

### Construction uses

<b>Aggregates</b>		225mt
of which:	Crushed Rock	104mt
	Sand & gravel - land won	46mt
	Sand & gravel - marine	12mt
	Recycled & secondary	63mt

<b>Cementitious</b> (including imports)		13mt
of which:	Cement (including imports)	11mt
	Other cementitious materials (Fly ash, GGBS)	2mt

<b>Ready-Mixed Concrete<sup>(1)</sup></b>	54mt
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<b>Concrete products</b>	27mt
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<b>Asphalt</b>	24mt
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<b>Dimension Stone<sup>(2)</sup></b>	1mt
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### Non-construction uses

<b>Rock<sup>(2)</sup></b>		15mt
of which:	Industrial Lime	1mt
	Agricultural Lime <sup>(2)</sup>	2mt

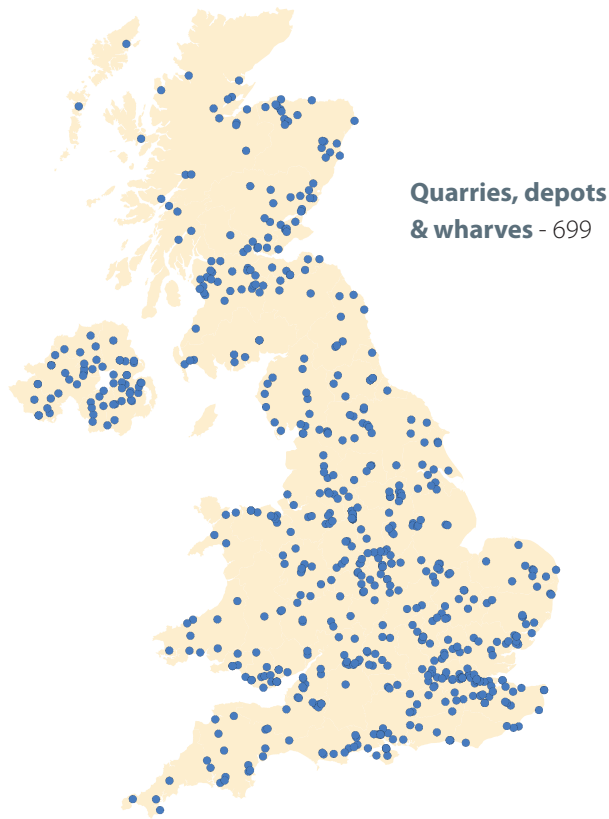
<b>Industrial Sand<sup>(2)</sup></b>	4mt
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<sup>(1)</sup> Converted using 2.38 tonnes per cubic metre of ready-mixed concrete.

<sup>(2)</sup> 2014.

Source: MPA, AMRL.

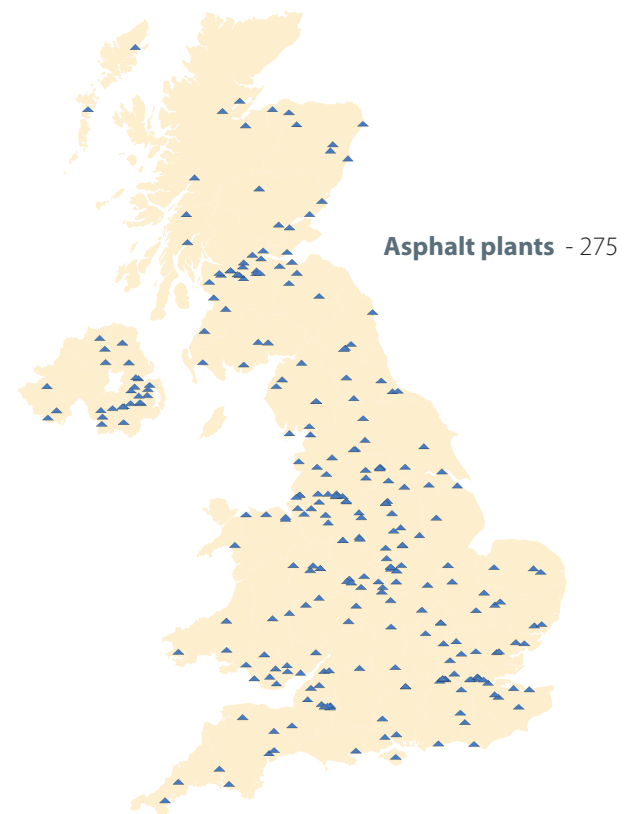
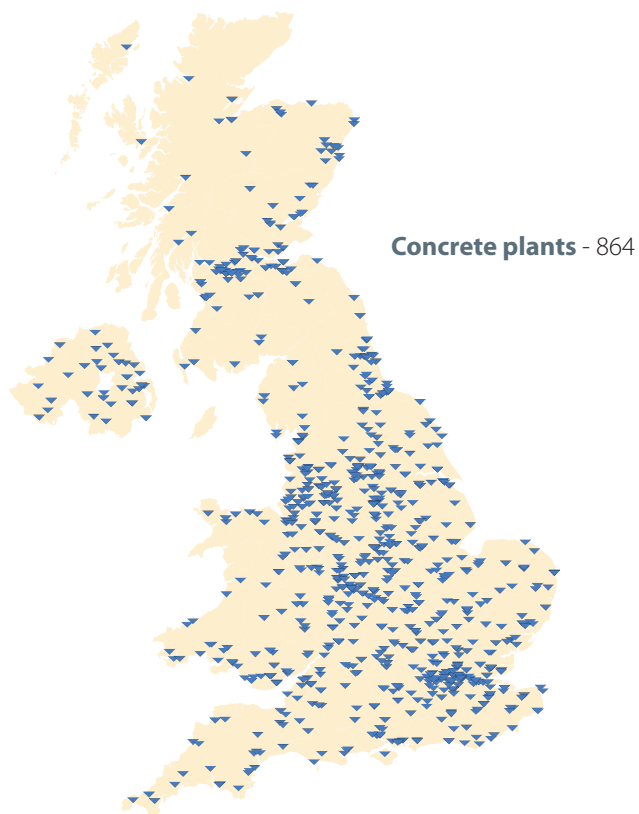
# Locations of MPA member active sites/plants, 2016



1.2: **Number of MPA member active sites/plants in 2016.**

Source: MPA.

Crushed rock quarries	253
Sand & gravel quarries	260
Depots or wharves	113
Railheads	15
Recycling plants	94
Cement quarries and plants	24
Ready-mixed concrete plants	864
Precast concrete plants	61
Lime quarries and plants	12
Asphalt plants	275
Mortar plants	38
Dimension stone quarries	43
Silica sand quarries	18
Slag plants	4



# 2 An essential industry

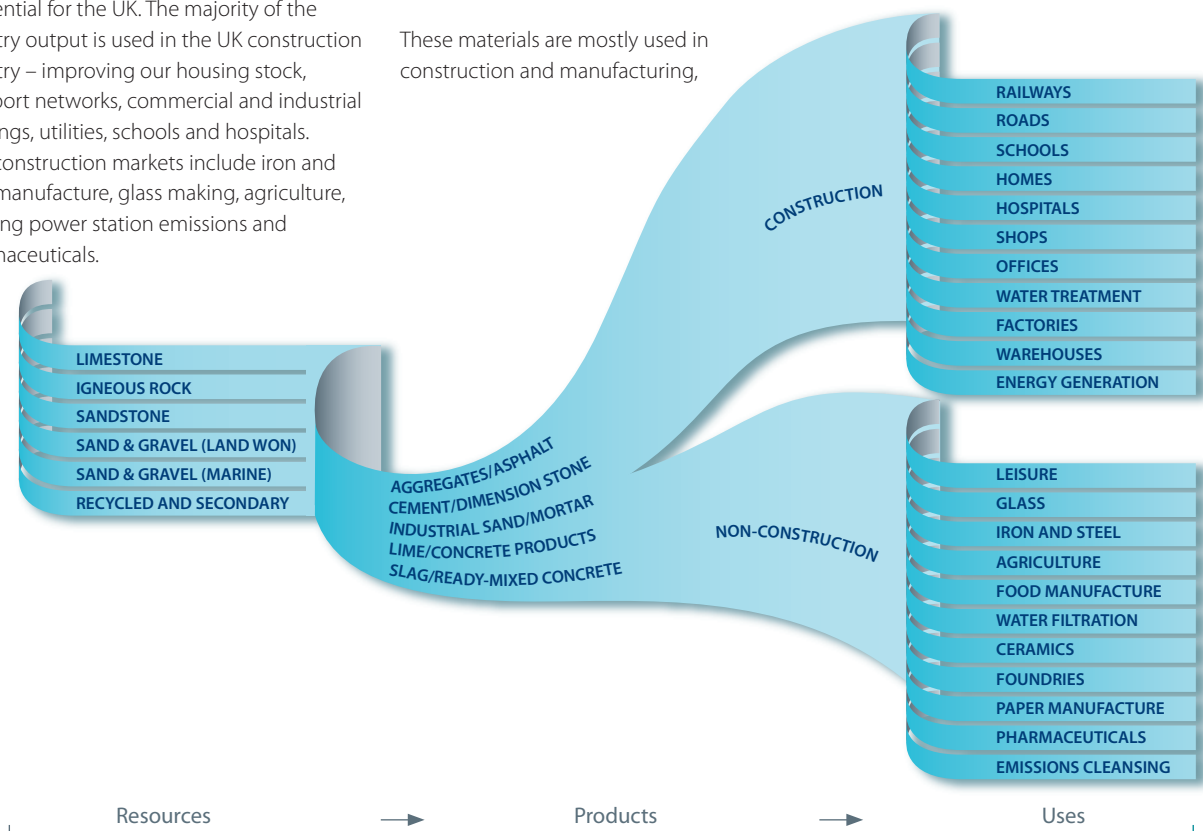
## 2.1 Mineral production

The Mineral Products Industry is a vital enabling sector of the UK economy, which has a broad impact on overall economic activity. As the largest element of the construction supply chain, a supplier of key materials to many other industries and the largest material flow in the UK economy, a healthy domestic Mineral Products Industry is essential for the UK. The majority of the industry output is used in the UK construction industry – improving our housing stock, transport networks, commercial and industrial buildings, utilities, schools and hospitals. Non-construction markets include iron and steel manufacture, glass making, agriculture, cleaning power station emissions and pharmaceuticals.

The British Geological Survey estimates that about 215 million tonnes of aggregates and other raw minerals are extracted each year from the UK. To this, the industry adds about 130 million tonnes of manufactured mineral products such as cement and asphalt, as well as over 60mt of recycled and secondary aggregates.

These materials are mostly used in construction and manufacturing,

underpinning every activity of the economy by supplying vital raw materials at the heart of UK growth. International trade in minerals and mineral products is limited with, for instance, domestic sources supplying about 85% of the cement market.



6 storey city centre office building  
**16,480 tonnes of concrete**

HS2  
**25mt of aggregates/minerals**

Community hospital  
**53,000 tonnes of concrete**

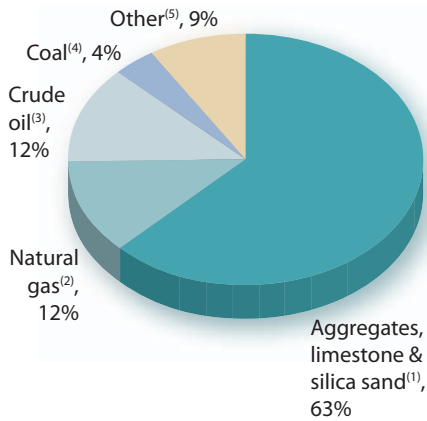
House  
**12 tonnes of mortar**  
**200 tonnes of aggregates**

School **15,000 tonnes of concrete**

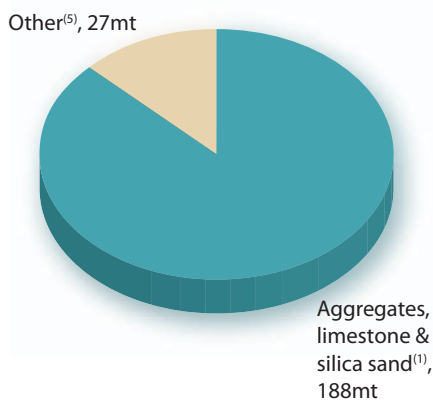
Crossrail  
**250,000 concrete segments**

2.1.a: UK production of primary minerals, 2014. Source: BGS.

All minerals



Non-energy minerals



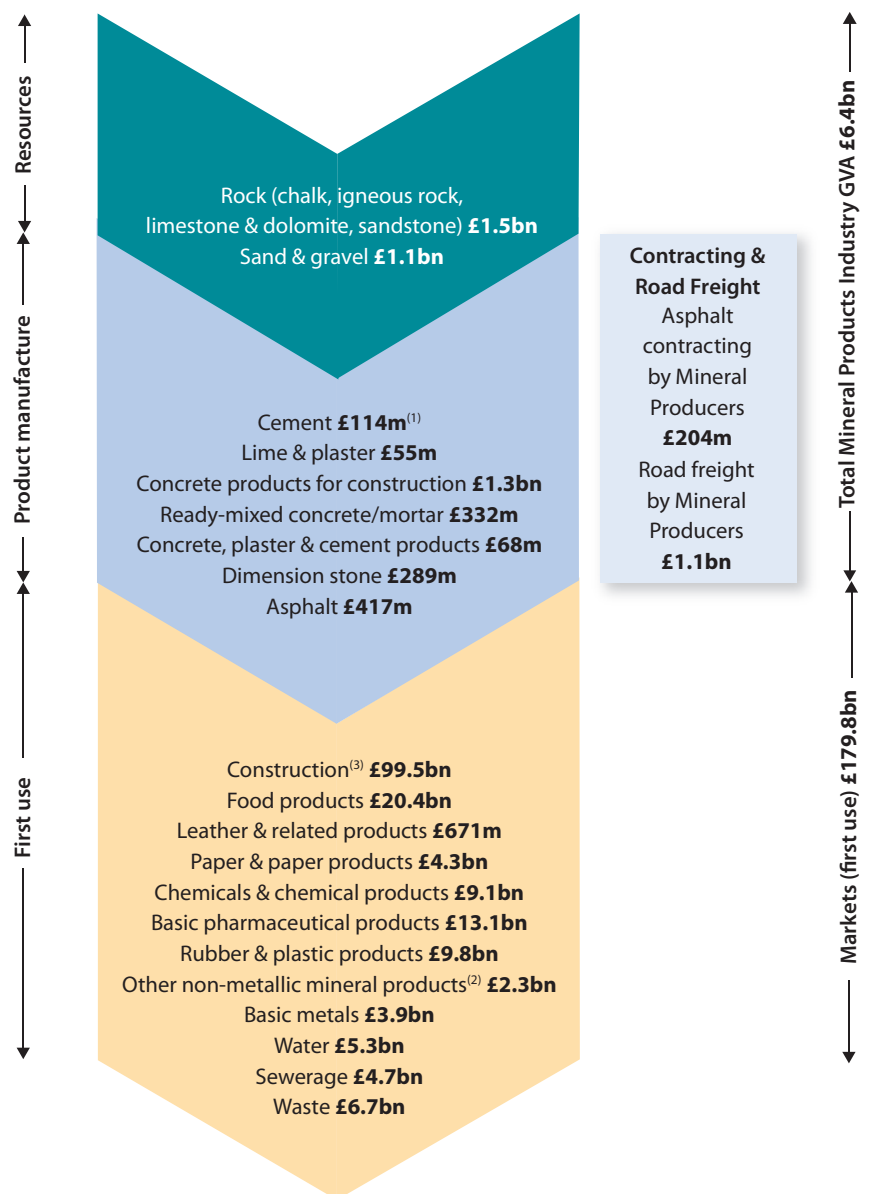
<sup>(1)</sup> Igneous rock, limestone & dolomite, sand & gravel, sandstone and silica sand.  
<sup>(2)</sup> Onshore, offshore and colliery.  
<sup>(3)</sup> Onshore and offshore.  
<sup>(4)</sup> Deep mined, opencast and other.  
<sup>(5)</sup> Methane condensates, lead, gold, silver, chalk, clay & shale, slate, ball clay, barytes, chert & flint, china clay, fluorspar, gypsum, lignite, potash, salt, talc, china stone, fireclay and peat. Peat conversion factor: 0.8 tonne per cubic metre (dry peat).

2.2 Gross Value Added (GVA)

The Mineral Products Industry is defined as the extraction of aggregates, dimension stone, limestone and silica sand, as well as the production of asphalt, cement, concrete, lime, mortar and slag. It also includes a share of road freight activities, as mineral producers deliver most of their materials by road, as well as some road contracting work when asphalt producers lay the asphalt themselves.

Based on this definition, MPA estimates that the Mineral Products Industry directly contributed to the UK economy by generating over £6.4bn in GVA in 2014, up from £5.4bn in 2013 according to revised official statistics. This is greater than programming and broadcasting activities, or the creative industry, and is comparable to air and spacecraft. It had a turnover of £20bn and contributed to £495bn turnover in industries downstream of the supply chain

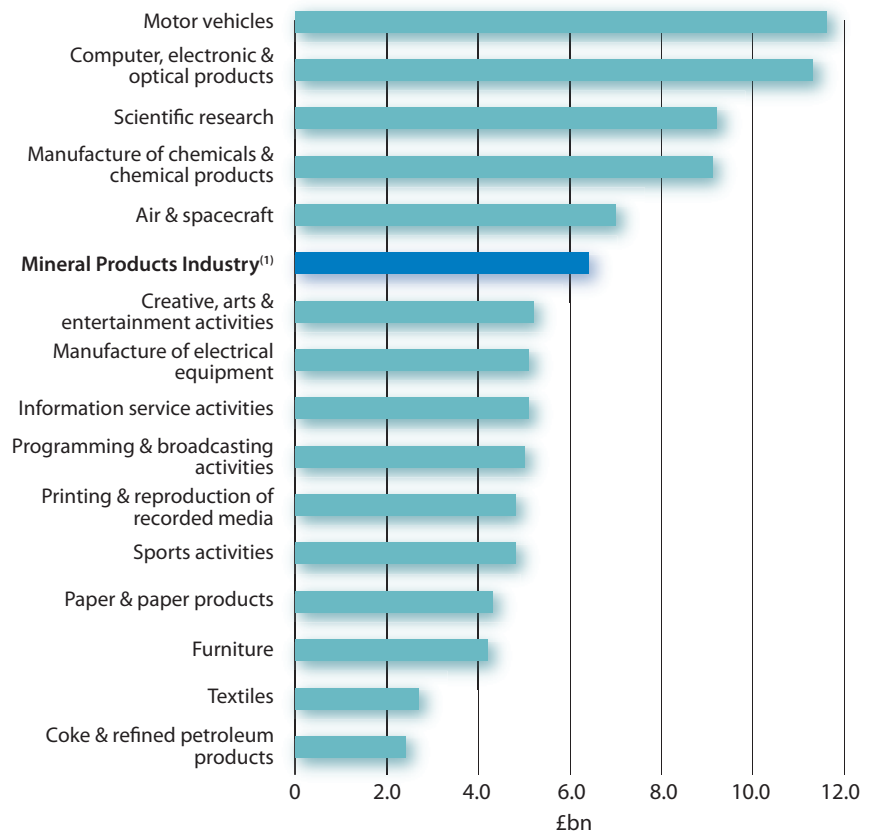
2.2.a: GVA of the Mineral Products Industry, 2014. Source: MPA, ONS, ABS.



<sup>(1)</sup> MPA believes the ONS estimate for the cement industry's GVA understates the industry's actual GVA. The 2014 GVA for the cement industry is estimated by the MPA to be around £355m.  
<sup>(2)</sup> Excludes minerals covered by the MPA membership, which are included in the manufacturing stage of the supply chain.  
<sup>(3)</sup> Excludes asphalt contracting work carried out by mineral producers.

2.2.b: **GVA of selected industries, 2014.** Source: MPA, ONS, ABS.

<sup>(1)</sup> This is not an official ONS Standard Industrial Classification (SIC), but reflects MPA members' activities.



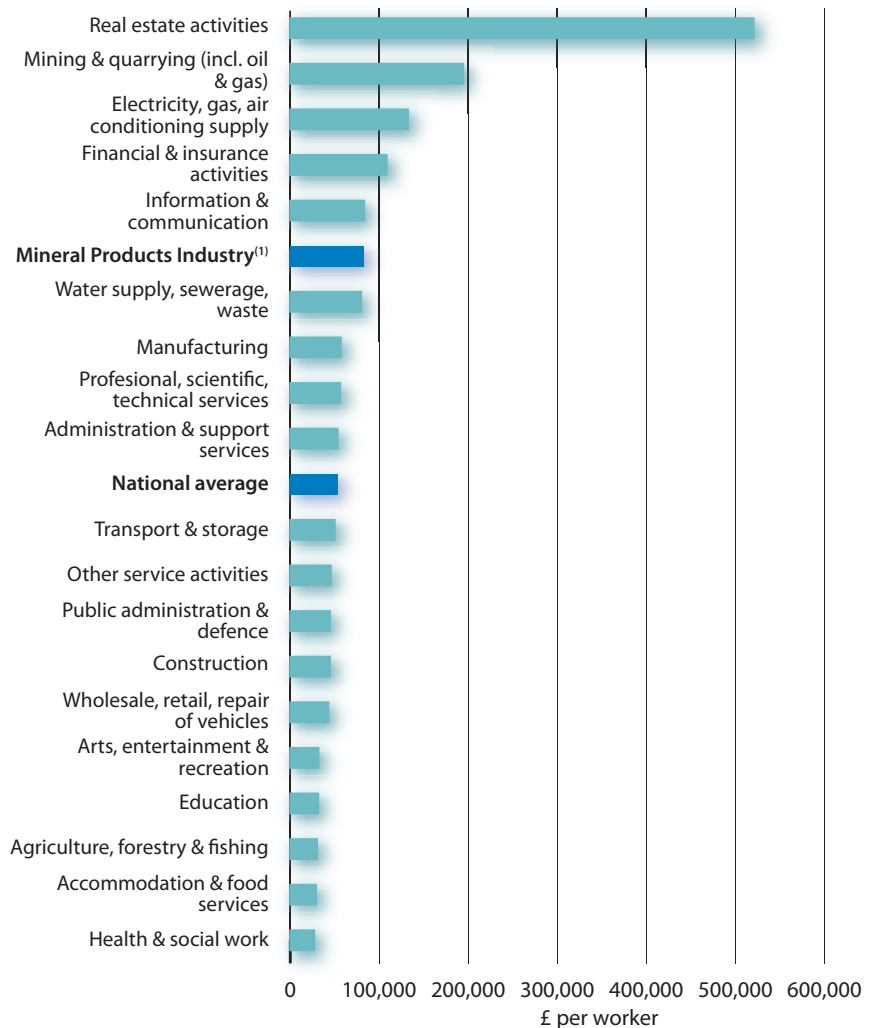
2.3 **Productivity**

Whilst directly employing 78,000 people and supporting 3.4m jobs through its supply chain in 2014, the Mineral Products Industry is also a highly productive industry: each worker produced about £82,000 in 2014, 1.6 times more value added than the national average.

2.3.a: **Productivity by industry, 2014.**

Source: MPA, ONS, ABS, Labour Force Survey.

<sup>(1)</sup> This is not an official ONS Standard Industrial Classification (SIC), but reflects MPA members' activities.



# 3 Mineral product profiles

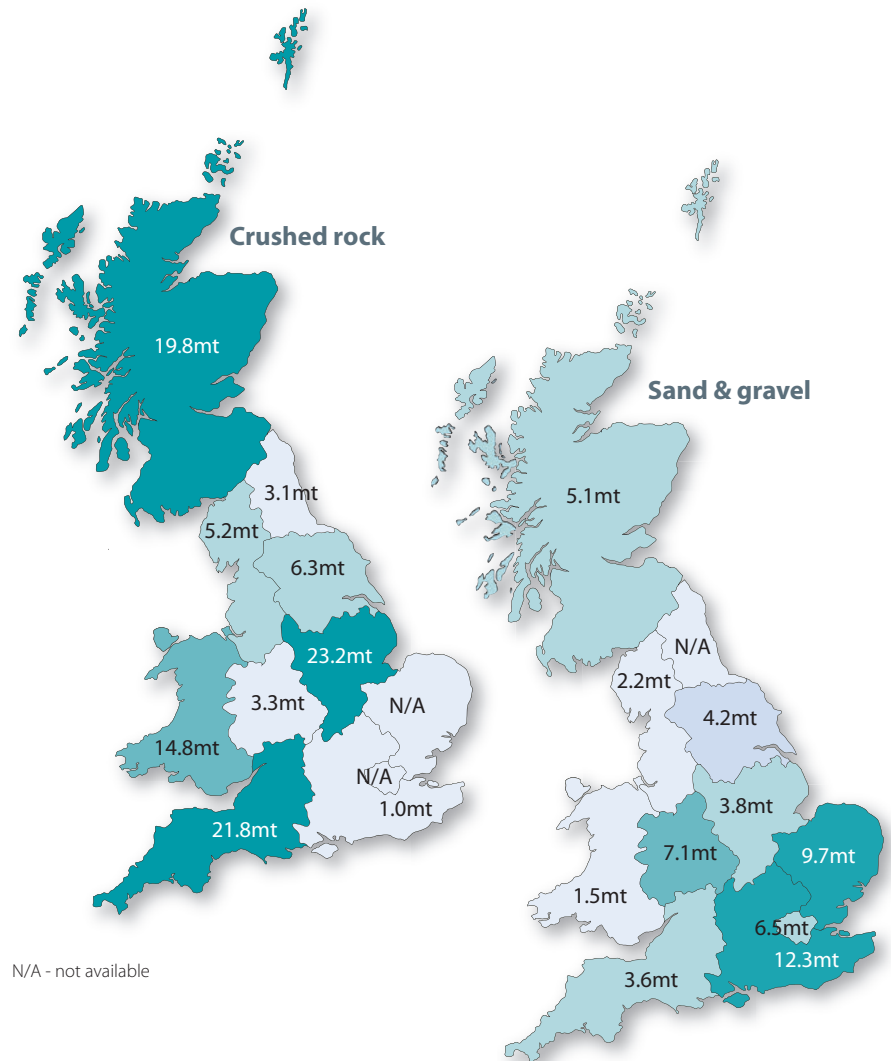
The Mineral Products Industry, represented by the MPA, comprises aggregates, asphalt, cement, ready-mixed and precast concrete, industrial sand, lime, mortar, slag, and dimension stone.

## 3.1 Aggregates (crushed rock, sand & gravel)

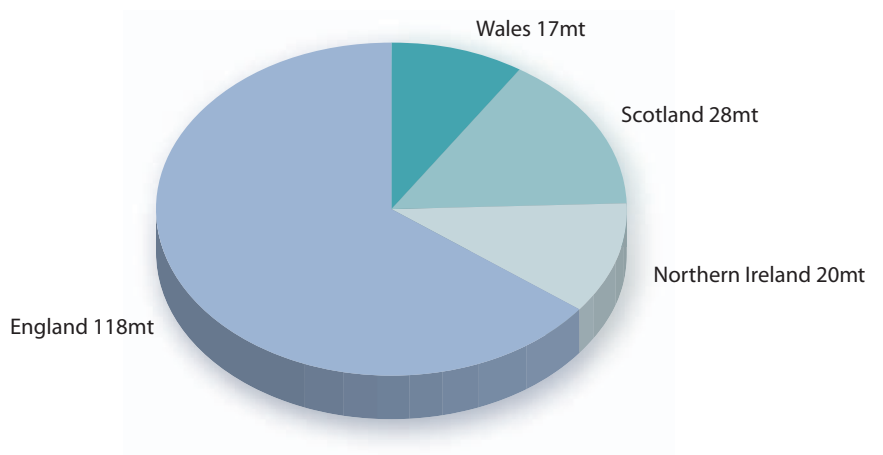


Within aggregates, the major supply tonnage is crushed rock with significant contributions from sand & gravel and recycled & secondary materials. The sand & gravel supply comprises both land-won and marine dredged materials. This broad breakdown disguises the fact that local and regional markets may be highly dependent on a particular type or source of aggregate as a consequence of the physical availability of particular resource types and/or the market demand for particular products.

3.1.a: GB primary aggregates sales by region, 2014. Source: AMRI.



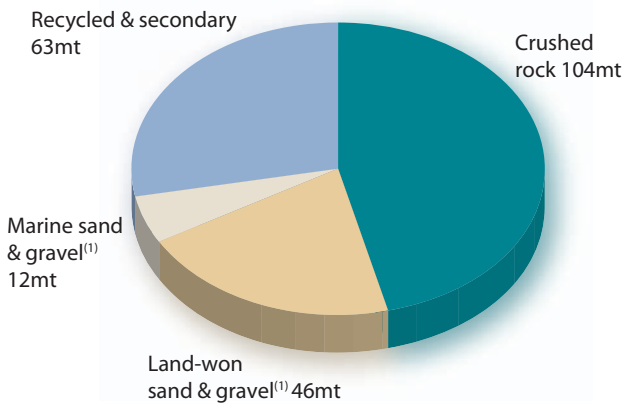
3.1.b: UK primary aggregates sales, 2015. Source: AMRI, MPA, QPANI.





3.1.c: **GB aggregates supply mix, 2015.**

Source: AMRI, MPA.

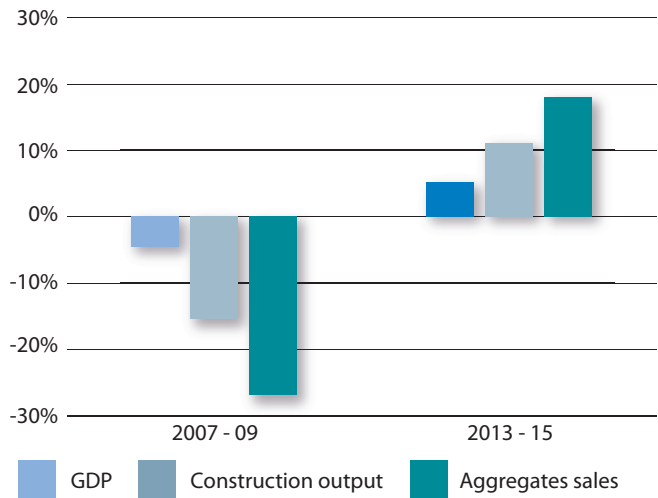


<sup>(1)</sup> 2015 volumes based on published 2014 land-won and marine sand & gravel shares.

Over the last 60 years, there have been some variations in the relative importance of the different sources of aggregates, most notably the increase in the supply of recycled & secondary materials evident since the early 1990s. Aggregate sales have been depressed since the onset of the recession in 2008, reflecting the significant decline in construction markets, but have started to recover since mid-2013.

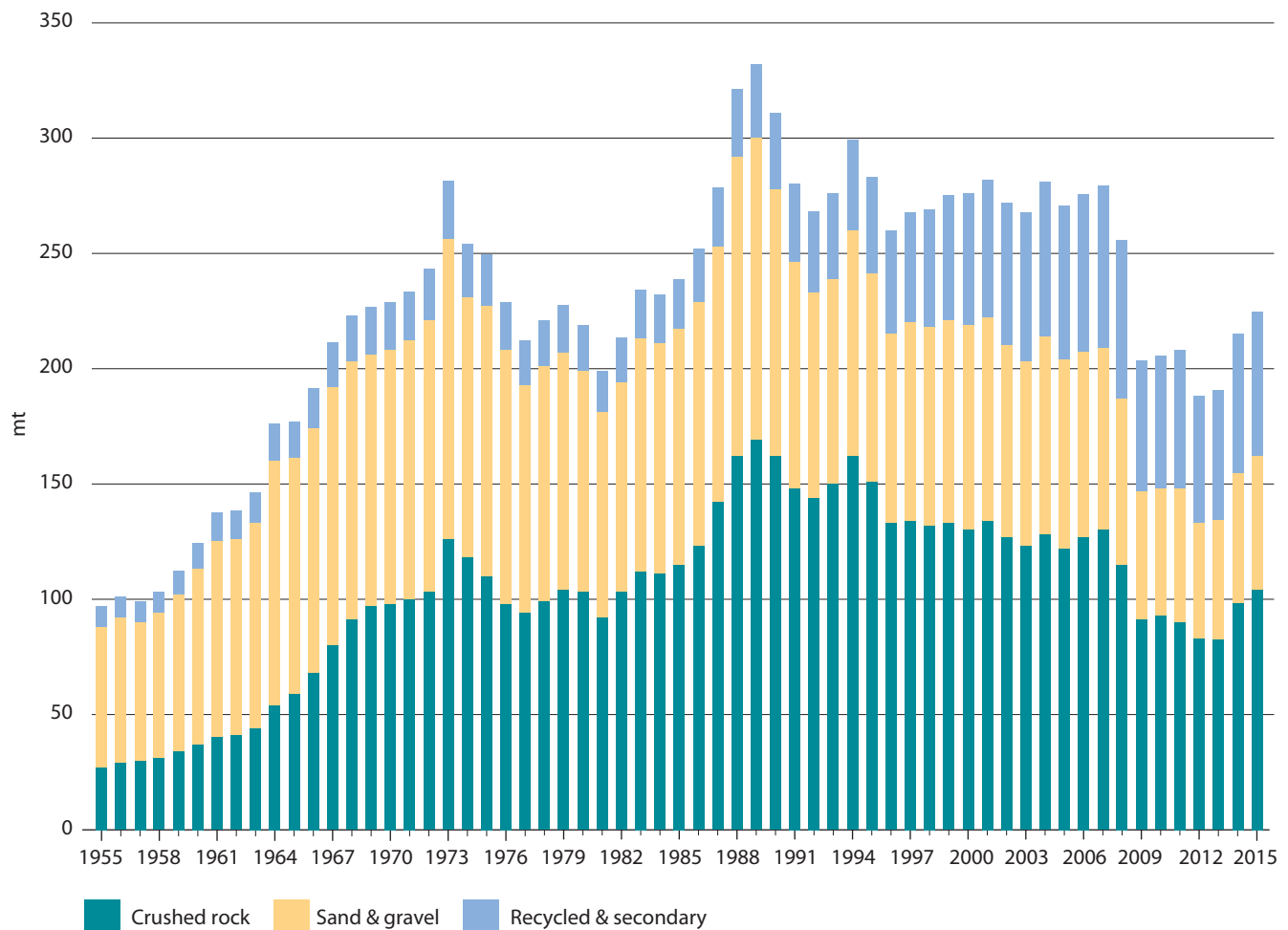
3.1.d: **Recession and recovery in aggregates demand.**

Source: ONS, AMRI, MPA.



Nonetheless, despite increasing by 18% between 2013 and 2015 as construction activity picked up, the aggregates market remains about 20% below 2007 volumes. This suggests that there remains significant scope for further improvements in minerals products and construction markets, particularly outside London and in non-housing related construction sectors.

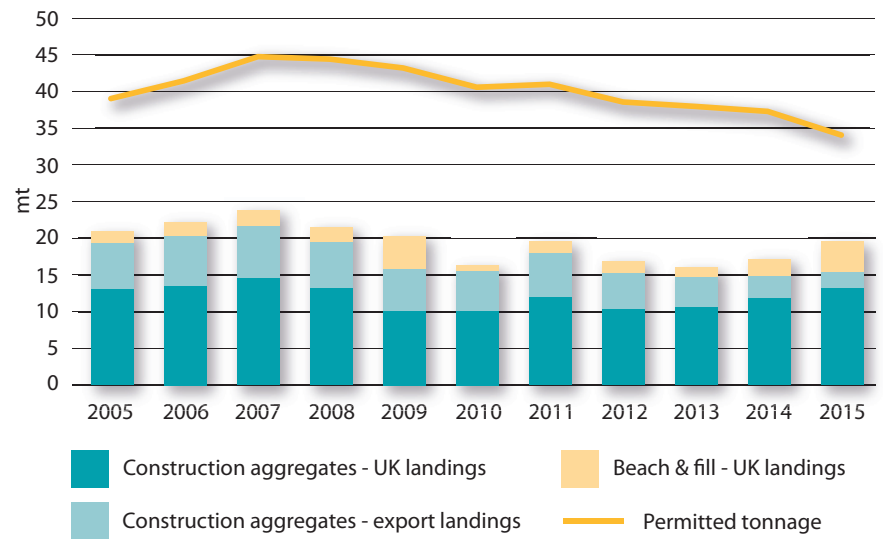
3.1.e: **GB aggregates markets by sources of supply.** Source: AMRI, MPA.



Marine aggregates satisfy about 20% of the construction needs for sand & gravel in England and Wales. Marine aggregates also support beach nourishment and contract fill projects in the UK and are exported overseas for use in construction. Total production of sand & gravel for UK construction, export, beach nourishment and contract fill, shows that total marine aggregates production levels have been consistently lower than the total tonnage amount permitted across all operators' production licences. The difference reflects the fact that individual dredging areas can offer a variety of materials, from fine sand to coarse gravel, so multiple licence areas in each dredging region ensure that there are enough materials for each operator to supply both current and future market needs, and also provide the industry with the flexibility to respond to any future changes in market demand that may occur. Multiple licences also ensure dredging areas are near to customers.

The biggest use for marine dredged aggregates is the construction market in the UK. Aggregates are a high bulk/low cost commodity, and consequently are highly sensitive to transport distances. Where local sources of aggregate are constrained, either because resources are not geologically present or because existing sources have

3.1.f: UK marine sand & gravel landings. Source: The Crown Estate.

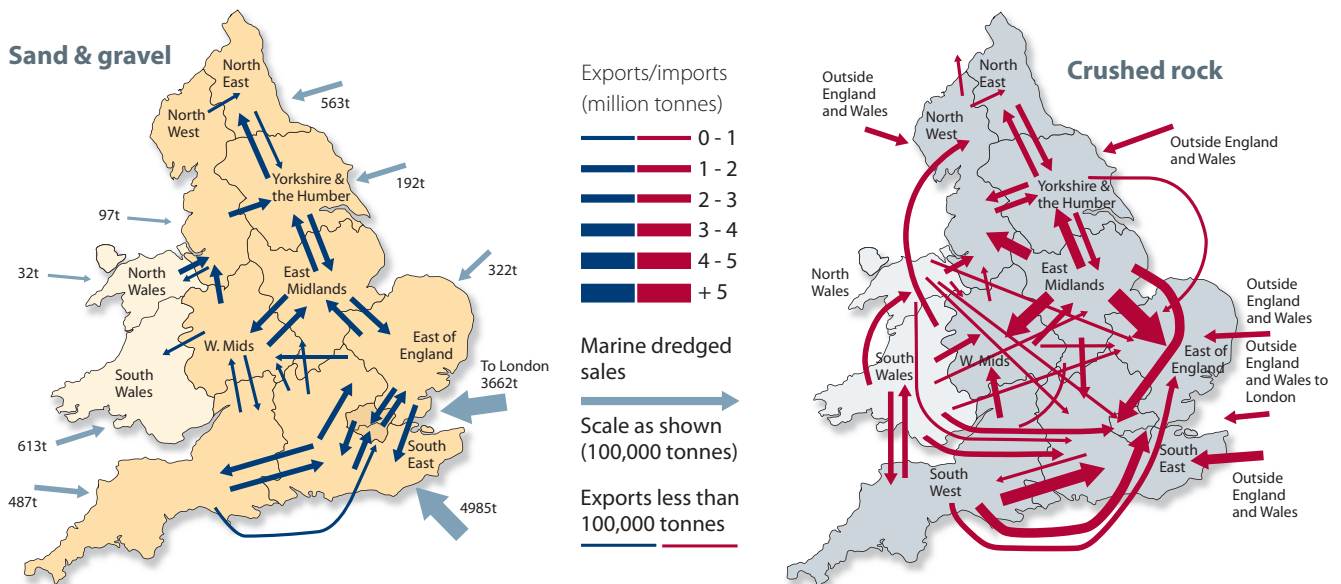


become depleted, alternative sources of supply have to be found. Through economies of scale, marine aggregates supplies can play an important role in the overall portfolio of construction aggregate supply by transporting large volumes (2,000 -10,000 tonnes/cargo) over considerable distances and delivering them to coastal towns and cities close to where they are needed. As an example of this, in London and the South East of England, one third of all the primary aggregates consumed in construction activity

come from marine sources.

Access to markets relies on the availability of suitable infrastructure to support the import of marine aggregates and crushed rock. Without the presence of suitable, unconstrained wharf and railhead facilities, the balance of supply cannot be maintained. This is why such sites should be subject to safeguard policies to protect their use, in accordance with the requirements set out in the National Planning Policy Framework.

3.1.g: Inter-regional flows of aggregates, 2009<sup>(1)</sup>. Source: DCLG.



<sup>(1)</sup> MPA does not hold data on regional flows. Maps are from DCLG and can be directly downloaded.

The underlying geology of the UK determines the local availability of mineral products which are only transported long distances when necessary. However, resources are not always distributed evenly and some inter-regional movement is necessary. The South East, for example, has its own supplies of sand & gravel but relies heavily on crushed rock brought in by rail from the East Midlands and South West and by sea from Scotland. It also requires marine dredged sand & gravel from coastal waters. The charts above show the main inter-regional crushed rock and sand & gravel movements.

### 3.2 Cementitious



Cement is the key component in producing ready-mixed concrete, precast concrete and mortar. Following a stable market in the early and mid-2000s, the economic recession saw cement sales drop by 34% between 2007 and 2009. Since 2012, markets have improved, but sales are still 18% lower than in 2007.

Cement is made by crushing and heating limestone or chalk with small amounts of other natural materials, such as clay or shale, in a rotating kiln to a temperature of 1450° Celsius. This chemically combines the stones into a hard substance called clinker, essentially changing calcium carbonate (CaCO<sub>3</sub>) to calcium oxide (CaO) which then reacts with silica (SiO<sub>2</sub>) to form calcium silicates with Ferrite and Aluminate mineral formation completing the mineralogy of the clinker complex. As well as the mineral content of the raw materials their moisture content is an important feature. Chalk has a higher moisture content than hard limestone and this tends to come with an energy penalty for the process. As the final step in (CEM I) cement making the clinker is ground to a powder with about four to five per cent gypsum, added to control the setting time of the end-product. Further blending occurs for the other cement types identified below.

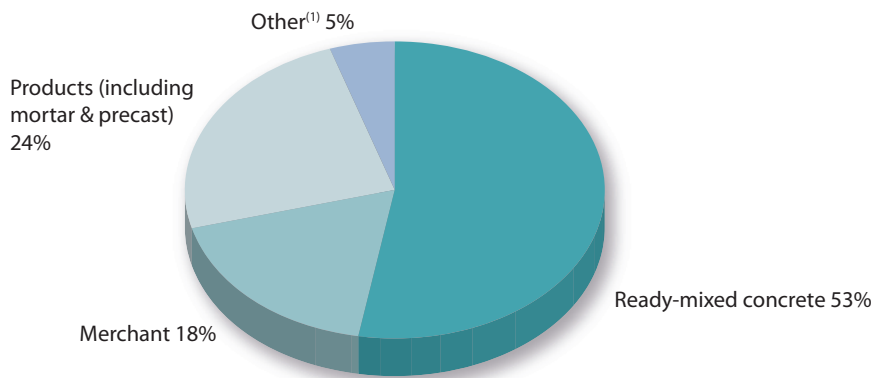
Three main classifications of cement sold in the UK are:

- **CEM I** – made from ground cement clinker and a small percentage of gypsum to control the material’s setting time when mixed with water;
- **CEM II** – is a cement containing between 6 and 35% fly ash<sup>1</sup>, limestone or blast furnace slag<sup>2</sup>;
- **CEM III** – is a cement containing between 36 and 95% blast furnace slag.

There are a variety of cement products designed for specific end-uses.

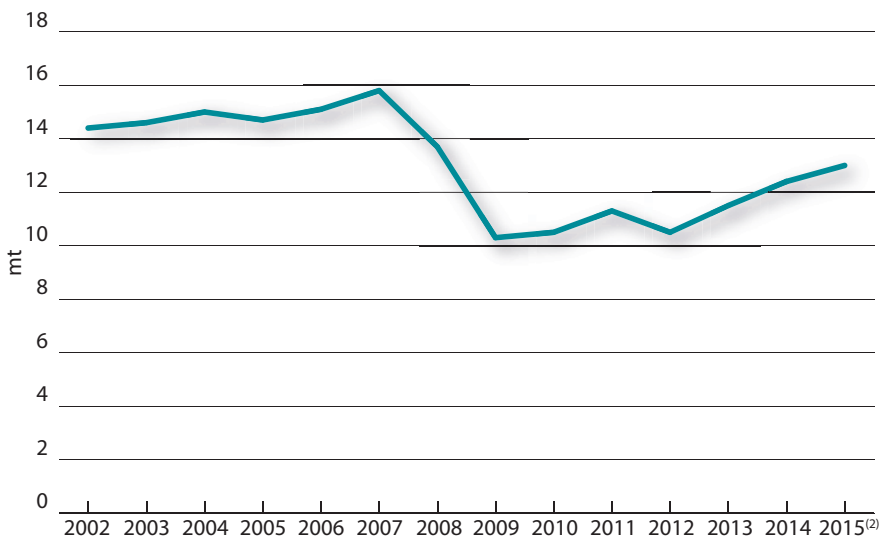
<sup>(1)</sup> Fly ash is a by-product from coal fired power stations.  
<sup>(2)</sup> Blastfurnace slag is a by-product of steel production.

3.2.a: MPA cement usage in GB, 2014. Source: MPA.



<sup>(1)</sup> Includes cement that goes into soil stabilisation, special grout formulation, diaphragm wall grouts and other applications that do not fall into either ready-mixed concrete products or merchant.

3.2.b: MPA cementitious<sup>(1)</sup> sales in GB. Source: MPA.



<sup>(1)</sup> Includes imports, pulverised fuel ash and granulated blast furnace slag (GGBS).

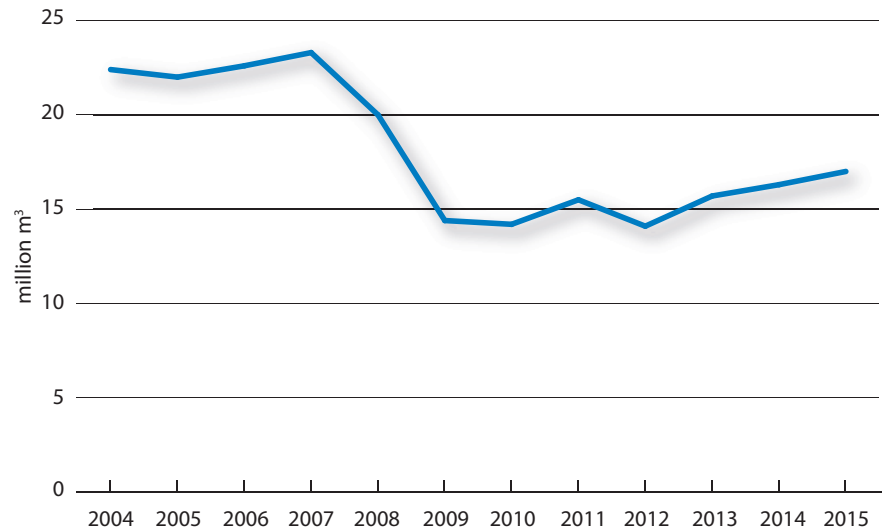
<sup>(2)</sup> 2015 total cementitious sales assumed to grow in line with MPA sales of ready-mixed concrete.

### 3.3 Ready-mixed concrete

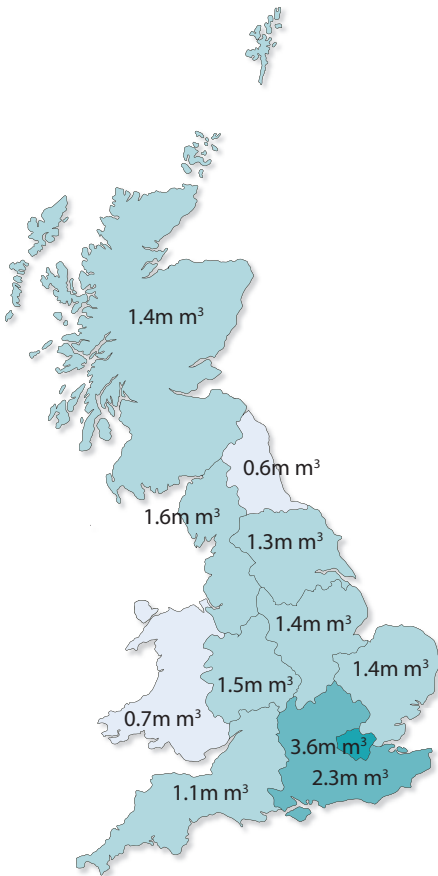


Ready-mixed concrete is an essential building material and is therefore a reliable indicator of construction activity from home building to high-rise and infrastructure. It is readily available throughout GB where the average delivery distance is eight miles. Demand for ready-mixed concrete is closely aligned with both construction activity and the general economy, and reflecting the general economy there continues to be nearly three times more supplied in London and the South East than in most other GB regions.

3.3.a: MPA ready-mixed concrete<sup>(1)</sup> sales in GB. Source: MPA.



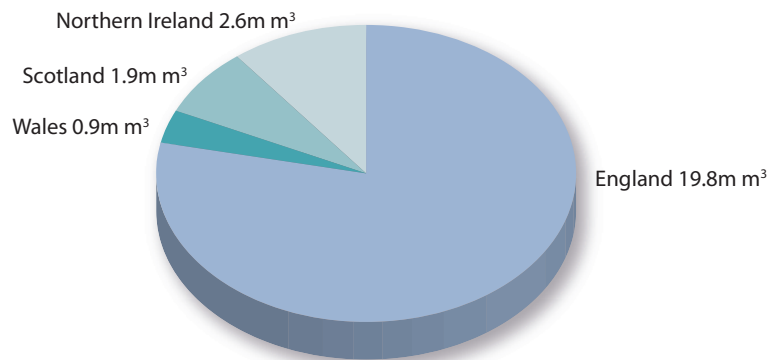
3.3.b: MPA ready-mixed concrete<sup>(1)</sup> sales by region, 2015. Source: MPA.



<sup>(1)</sup> Includes ready-mixed produced from fixed and site plants.

<sup>(1)</sup> Includes ready-mixed produced from fixed and site plants.

3.3.c: UK ready-mixed concrete<sup>(1)</sup> sales, 2015. Source: MPA, QPANI.



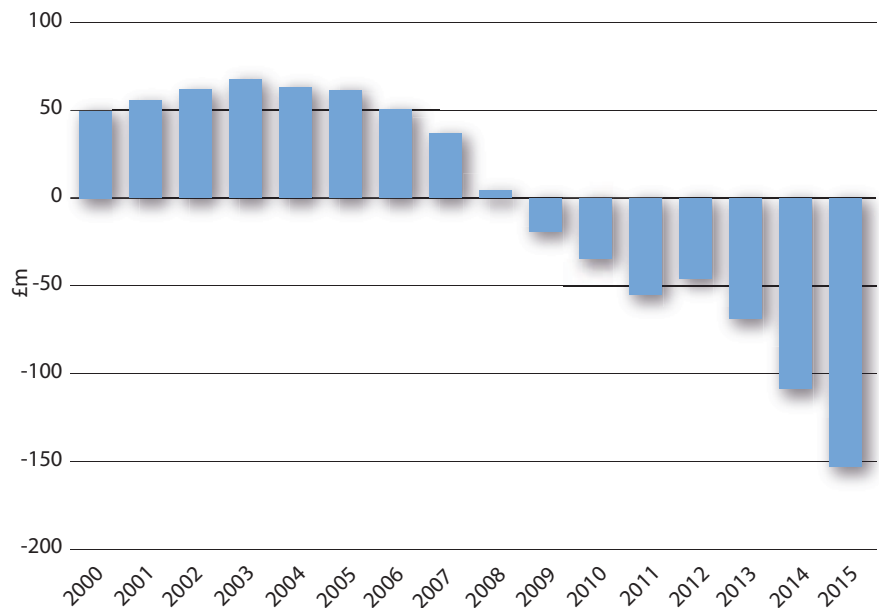
<sup>(1)</sup> GB estimates are based on the assumption that MPA sales represent 75% of the total GB market. Includes fixed and site plants.

### 3.4 Precast concrete



Precast concrete is an essential ingredient of many buildings and civil engineering projects. For instance, 80% of all new roofs are made from concrete tiles, whilst concrete and masonry provide strength, thermal mass and fire protection to 85% of new homes built over the last 30 years. The market is mainly supplied from domestic sources but the chart points to the vulnerability of this sector to international competition, as the UK has moved from a trade surplus to a trade deficit over the last 10 years. The UK has been a net importer of concrete products since 2009.

3.4.a: **UK concrete products trade balance.** Source: BIS Building Materials and Components.



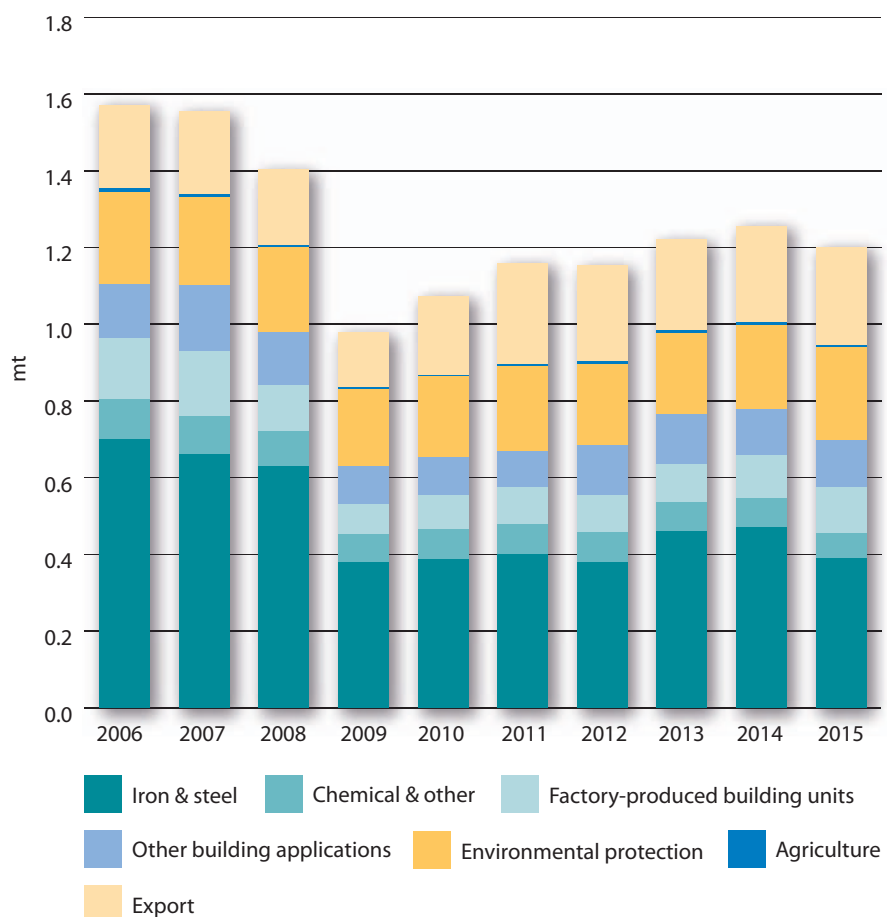
### 3.5 Lime



#### 3.5.1: Industrial Lime

Many diverse industries such as steel, chemicals, glass and construction rely heavily on industrial lime. This unique and versatile mineral is also used in the production of sugar, the treatment of contaminated land, the desulphurisation of flue gases from power stations and the purification of water for human consumption. The sector makes a positive contribution to the UK trade balance, with around 20% of industrial lime being exported.

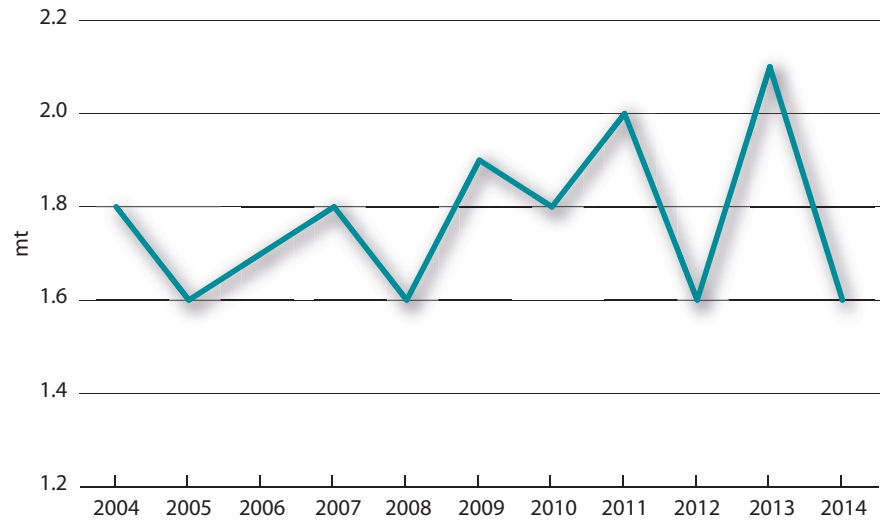
3.5.a: **Lime sales by end-usage in GB.** Source: MPA.



### 3.5.2: Agricultural Lime

Quarried agricultural lime remains UK agriculture's principal tool in moderating the effects of climate change, excess soil acidity, and supplying essential calcium plant nutrient. Lime plays a key role in protecting one of nature's greatest assets, the soil; maintaining a healthy and productive environment essential to meeting the challenges of future food security. It is estimated that twice as much agricultural lime as now needs to be applied to UK farmland to prevent soil becoming too acidic.

3.5.b: Sales of agricultural lime in GB. Source: AMRI.



## 3.6 Asphalt

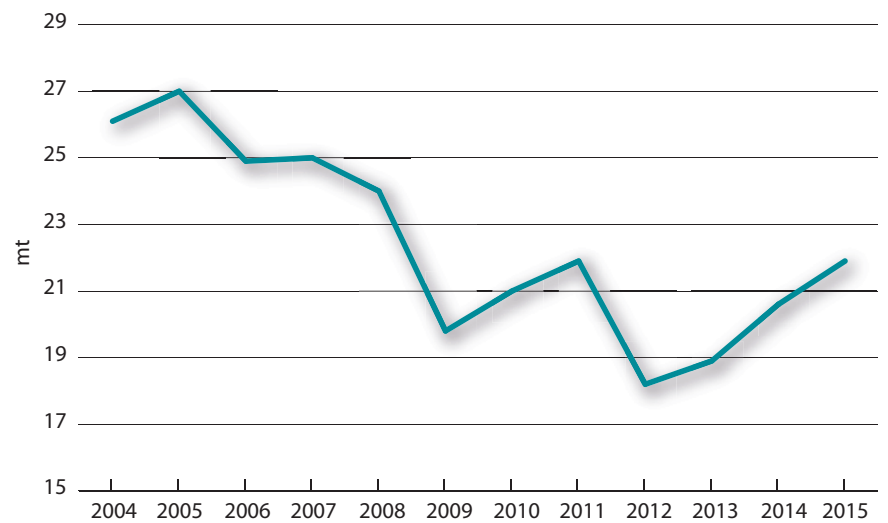


Roads are the economic and social arteries of the nation, ensuring door to door routes for delivery of goods and services. They are the primary means of access to all parts of integrated transport networks and as such we depend upon asphalt for road construction and maintenance.

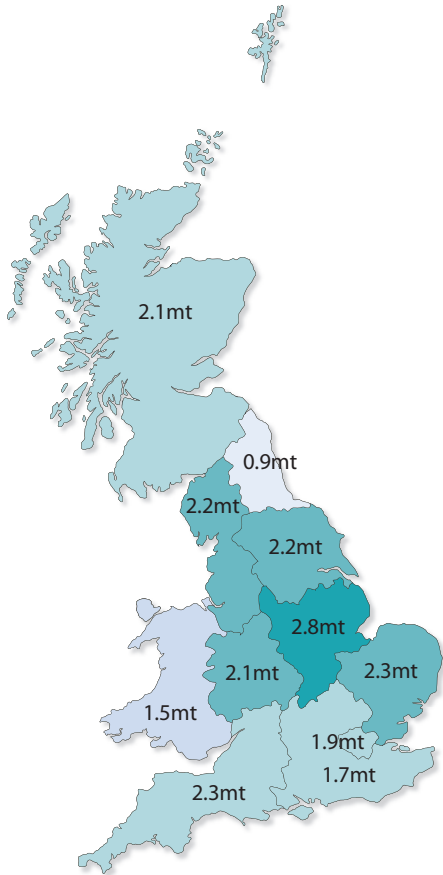
Asphalt is produced in a network of local plants, which serve both the local and national road networks. Asphalt provides sustainable solutions as it is uniquely 100% recyclable back into itself, whilst delivering cost effective, safe, comfortable and quiet road surfaces. Ongoing research and innovation is striving to further enhance the durability and sustainable credentials of asphalt materials to support road user and owner demands.

Following the recession, these markets declined very steeply in 2012, but markets have picked up since 2013. Asphalt sales rose 16% between 2013 and 2015, but remain well below levels seen prior to the recession.

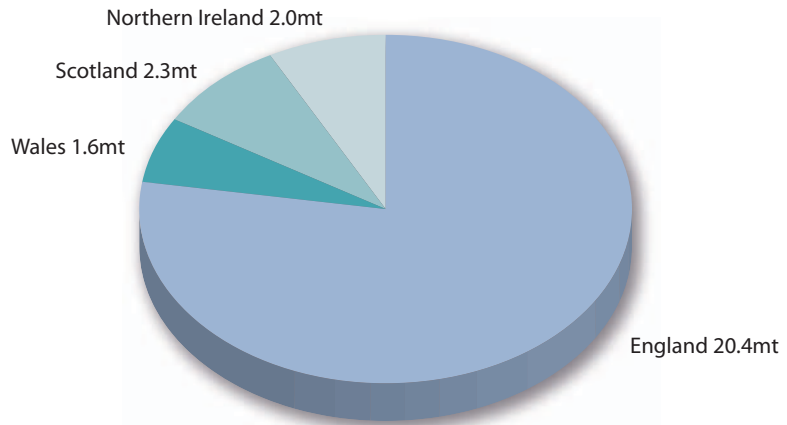
3.6.a: MPA asphalt sales in GB. Source: MPA.



3.6.b: MPA asphalt sales by region, 2015. Source: MPA.



3.6.c: UK<sup>(1)</sup> asphalt sales, 2015. Source: MPA.



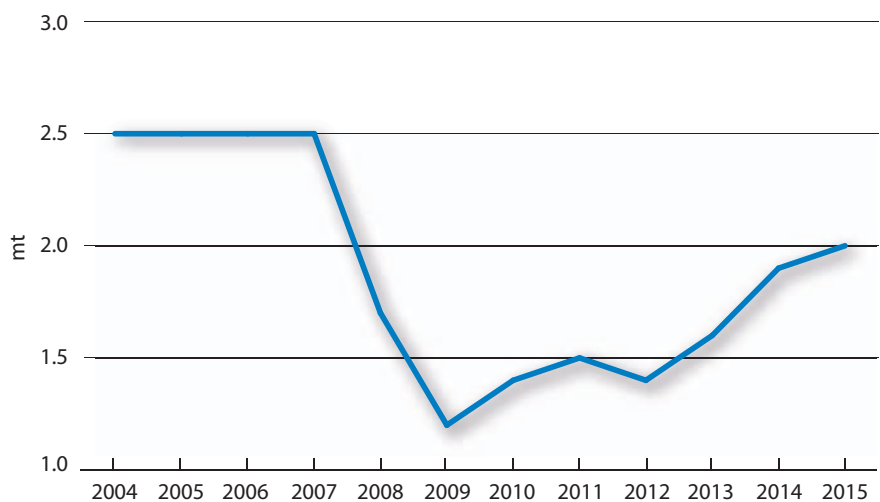
<sup>(1)</sup> GB estimates are based on the assumption that MPA sales represent 90% of the total GB market for asphalt.

### 3.7 Mortar



Mortar plays an essential role in the building and construction industries, providing the 'glue' that bonds bricks, blocks and stones into masonry. About 70% of mortars used in the UK come from factory-produced sources, as opposed to being mixed on site, reflecting the ever increasing demands for quality building products in the development of our built environment. With the financial crisis and the collapse in housing construction, mortar sales in Great Britain fell by half between 2007 and 2009. They have since started to recover, driven by the recovery in housing construction, but remain at 21% of pre-recession levels.

3.7.a: MPA mortar sales in GB. Source: MPA.

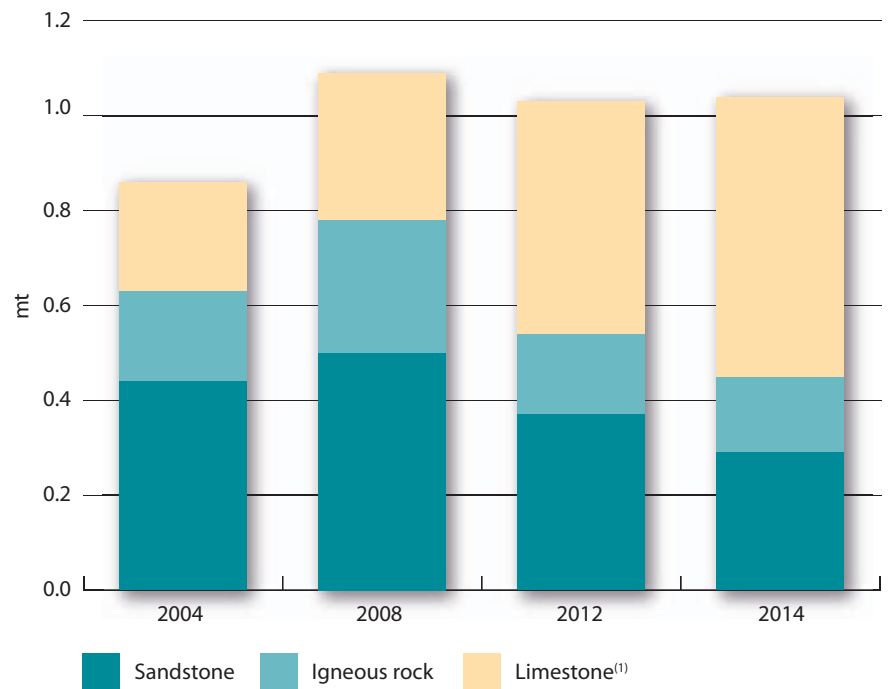


### 3.8 Dimension stone



The UK industry for dimension stone plays an important role in ensuring that the unique local characteristics of natural stone-built areas of the UK are maintained. In addition, there is demand from the heritage sector and from the prestige development market both home and overseas. Annual production continues from GB quarries at about 1 million tonnes, but imports from China and India continue to impact on the overall market.

3.8.a: Sales of dimension stone in GB (selected years). Source: AMRI.



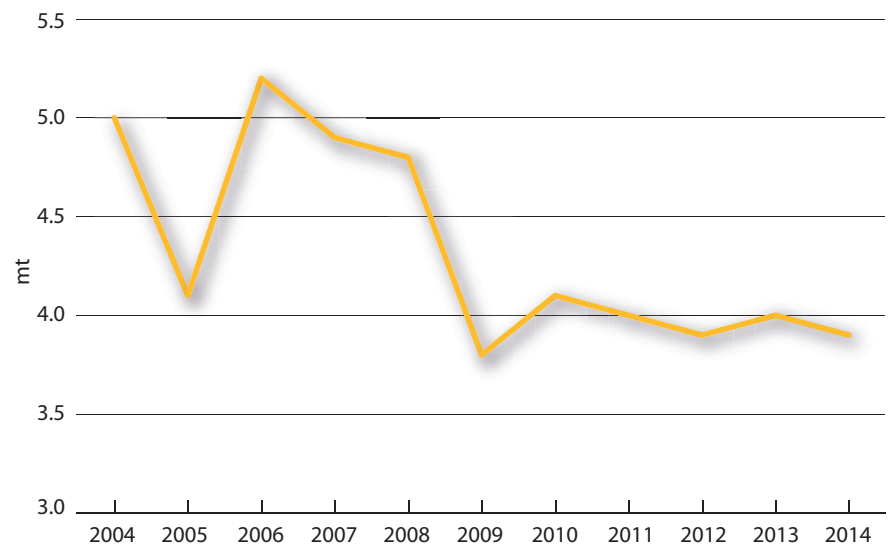
<sup>(1)</sup> Includes dolomite.

### 3.9 Industrial sand



As well as being used for glass making, paints, plastics and foundry moulds, high purity silica sands are also used in a wide range of essential industrial applications. After declining significantly between 2006 and 2009, in the light of changes in the UK heavy industry and manufacturing sectors, the production of industrial sand in GB stabilised at about 4 million tonnes per year.

3.9.a: Sales of industrial sand in GB. Source: AMRI.





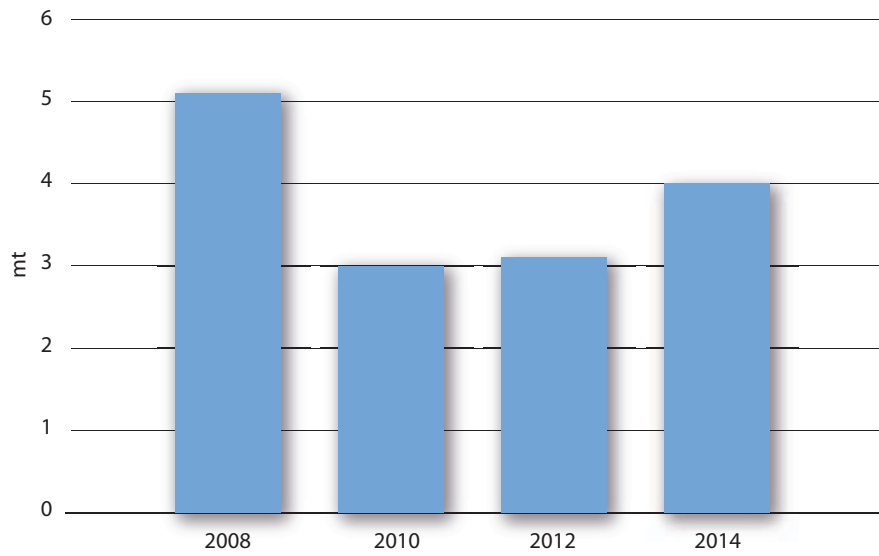
### 3.10 Slag



Slag is produced during the manufacture of iron and steel, and is processed into a variety of products, which can be used in many applications ranging from aggregates for construction products, to water treatment, soil conditioners and cementitious materials. The cementitious properties of blast furnace slag were discovered in the late 19th century and it has been widely used in cement manufacture for over 100 years.

In the UK, ground granulated blast furnace slag (GGBS) is supplied as a separate

3.10.a: Sales of slag in GB (selected years). Source: MPA.



component for concrete and is added at the concrete mixer. It generally replaces between 20 and 80 per cent of the normal Portland cement.

Air cooled blast furnace and steel slags are used as aggregates in construction products, with the latter playing an important role as a high skid resistance surfacing aggregate in maintaining the safety of our road network. They are also used in the treatment of waste water and for soil remediation in the agricultural markets.



## 4 MPA markets outlook

Market performance through 2015 was generally positive, although all materials except ready-mixed concrete have seen more modest growth than in 2014. Sales volumes for ready-mixed concrete increased by 4.3% in 2015 compared to 2014, 5.8% for crushed rock, and 3.1% for sand & gravel. Boosted by strong roads spending, asphalt sales grew by 6.5% in 2015, whilst slower housing activity throughout the year led to mortar sales growth of 4.2% in 2015, after an 18% increase in sales volumes in 2014.

Looking forward, the outlook for the construction sector remains positive, albeit slower than in 2014/15. The Construction Products Association expects construction

“The outlook for the construction sector remains positive, albeit slower than in 2014/15”

output to grow by 3% in 2016, followed by 3.5%-4% per annum until 2019. Private housing is expected to see further, albeit milder growth over the forecast period, supported by demand-boosting Government policies such as Help to Buy, including the newly-announced London Help to Buy and the Help to Buy ISA, along with the Starter Homes programme. Commercial activity is also expected to pick up, driven by construction of offices with large projects underway and planned in London, Birmingham, Manchester and some other major cities. However, infrastructure is the sector that is expected to see the biggest rise, projected to grow by 56% by 2019, with large projects planned in the roads, rail, water and energy sectors.

Based on the outlook for the general economic and construction activity, the MPA produces regular medium-term (3-year)

market forecasts for construction material sales volumes in GB, including aggregates, asphalt, ready-mixed concrete and mortar. The latest update, in February 2016 (covering 2016-19), suggests that by 2019, aggregates sales are expected to be up 16% compared to 2015, 13% for ready-mixed concrete, cementitious and mortar, and up 11% for asphalt sales.

Asphalt sales in 2016 are expected to be positive, growing by about 1%, more slowly than in 2015. This softer trend reflects a combination of factors, including faster than anticipated asphalt sales volumes through 2015 and greater uncertainty about the level of spending from Highways England, notably around renewals work. In the longer term, asphalt sales are expected to grow by 4% per annum over 2017/19, when the Road Investment Strategy increases sharply. Local authorities' road maintenance programme has recently been granted additional funding over the next 5 years (£250m in total), but this funding is not ring-fenced and local authorities' current spending remains under pressure.

Aggregates sales are expected to grow by 3% to 4% per annum over 2016-19. Crushed rock sales will continue to be more positive than sand & gravel in the short term, reflecting continued supply constraints for sand & gravel and substitution in concrete manufacture.

“Infrastructure is the sector that is expected to see the biggest rise, projected to grow by 56% by 2019”

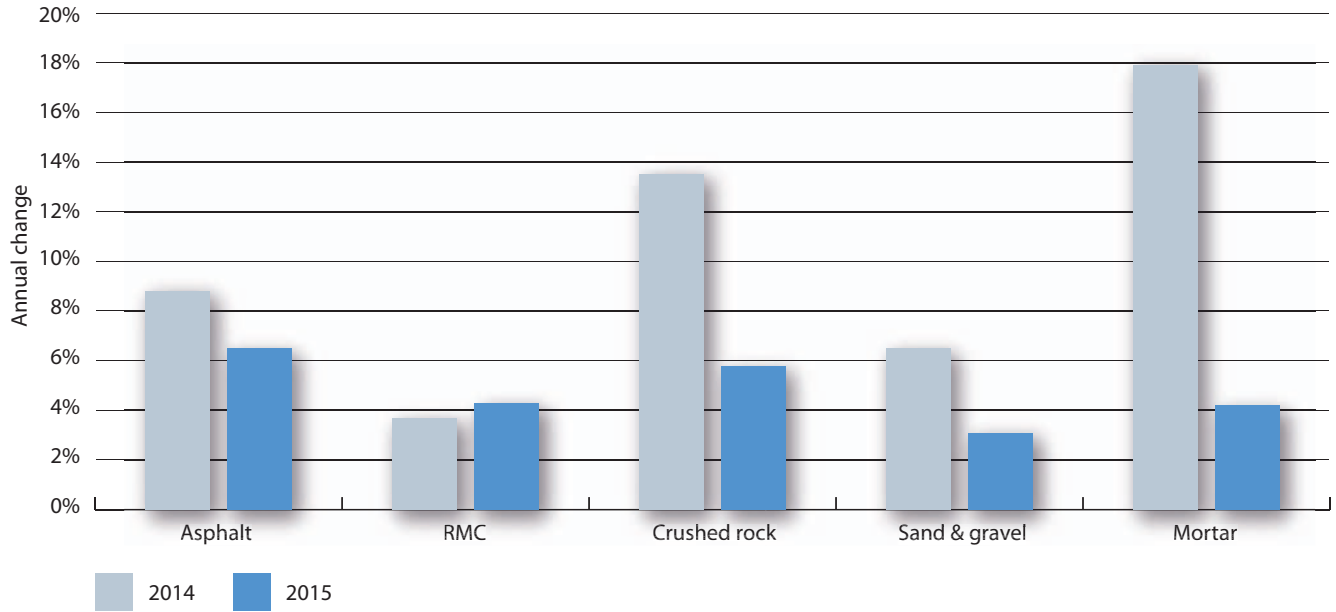
The ready-mixed concrete and cementitious markets are expected to rise by 3% per annum over the forecast period, reflecting

continued growth in private housing and the recovery of the commercial sector, notably outside London. On the infrastructure side, work on major projects such as Hinkley Point C and the Thames Tideway Tunnel is expected to start in the forecast period, although Crossrail tunnelling is now finished, so there will be some demand substitution between projects.

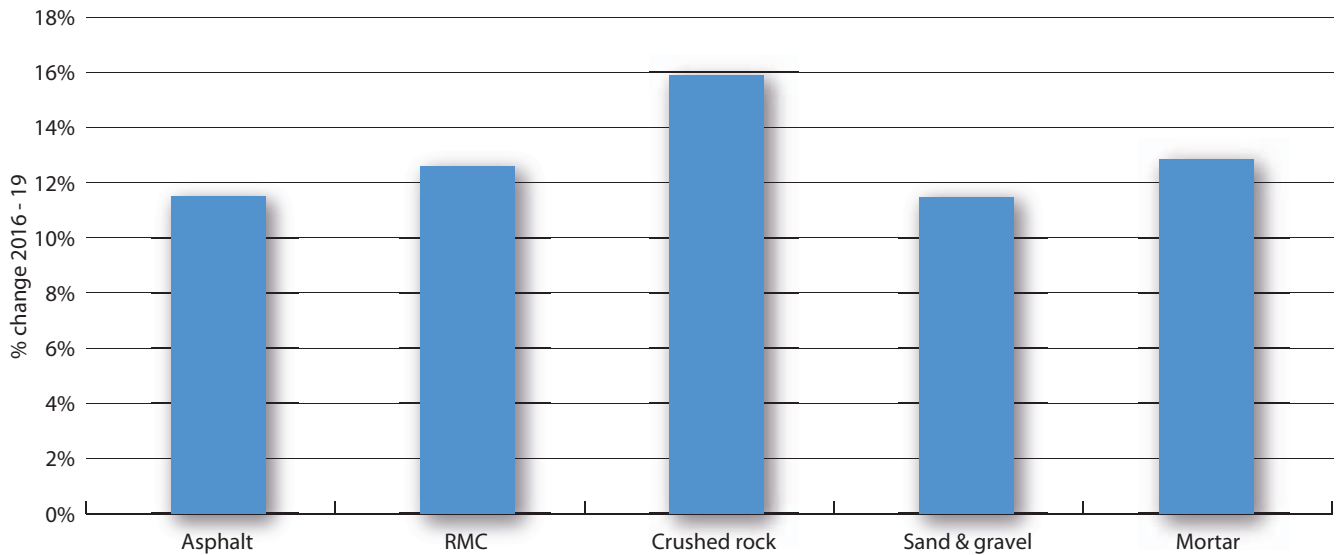
Finally, based on positive forecasts for housing starts in the next few years, mortar sales are expected to rise by 3% in 2016, slowing to 2% per annum by 2019.

Downside risks to this outlook exist. In addition to uncertainty around the timing and scale of some of the major projects, construction activity is also heavily influenced by general economic activity. Whilst the underlying UK macroeconomic fundamentals remain solid, GDP growth could easily deteriorate if global and domestic risks intensify. Downside risks include concerns about the Chinese economy, and more importantly, the general slowdown in the emerging markets. Domestically, the EU referendum and possibility for Brexit, i.e. Britain leaving the EU, has the potential to increase uncertainty for businesses and the UK economy.

4.1: MPA markets trends. Source: MPA.



4.2: Outlook for MPA markets sales volumes, 2016 - 19. Source: MPA.

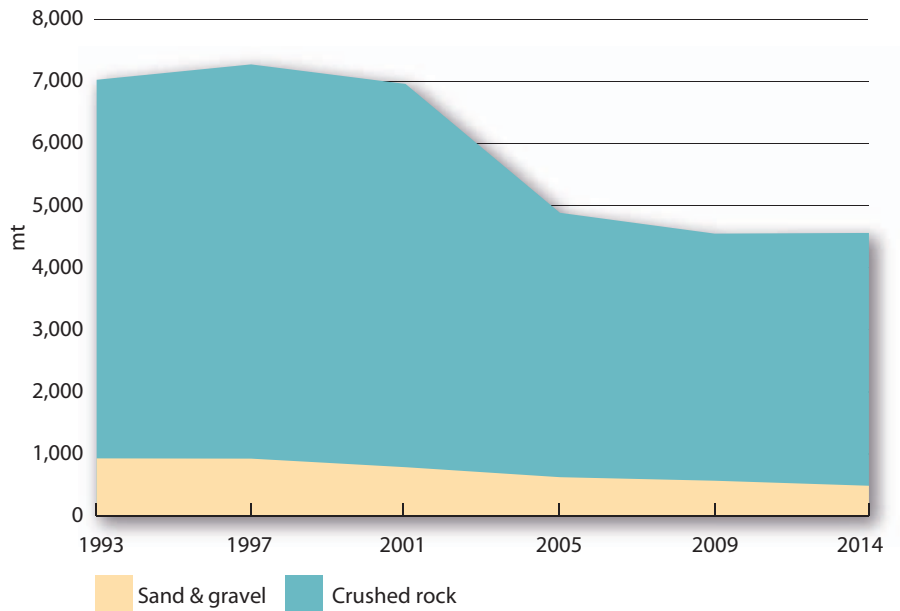


# 5 Long term aggregate supply

Subject to geological conditions, a key factor influencing the supply of aggregates is the operation of the mineral planning system. In England, the Managed Aggregates Supply System is designed to ensure a steady and adequate supply of aggregates. The adjacent chart indicates permitted reserves of aggregates since the early 1990s.

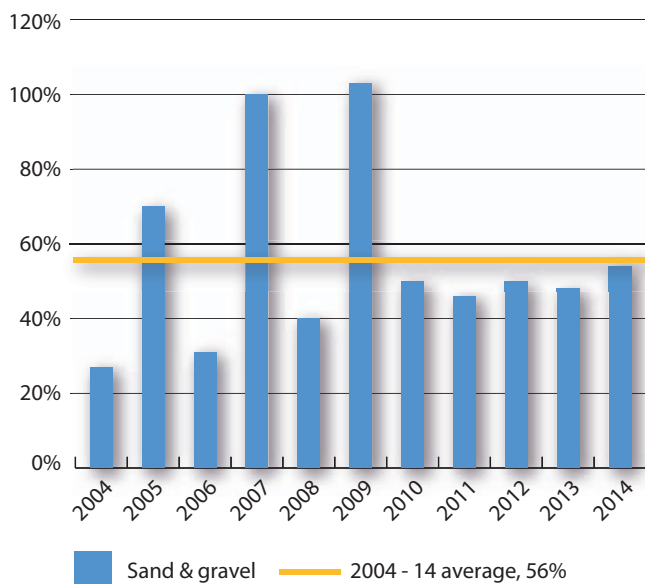
However, replenishment rates are more meaningful statistics, as they provide information on the long term availability of supply. If the amount of aggregates receiving planning permission equals the level of production, the replenishment rate is 100%. The chart below indicates that whilst replenishment rates for crushed rock have been close to parity in recent years, sand & gravel is being replaced at a much slower pace: for every 100 tonnes of sand & gravel used, only 56 tonnes is being replaced through new planning permissions, which has resulted in significant decline in permitted reserves of sand & gravel over the last 15 years. The implication of long term replenishment rates below 100% is that shortages of supply may become apparent. Evidence from Local Aggregates Assessments and Local Plan formulation suggests that this is beginning to appear in parts of Yorkshire, the South West, the South East, the North West, and the West Midlands.

5.1: Permitted aggregates reserves in England and Wales. Source: BGS, MPA.

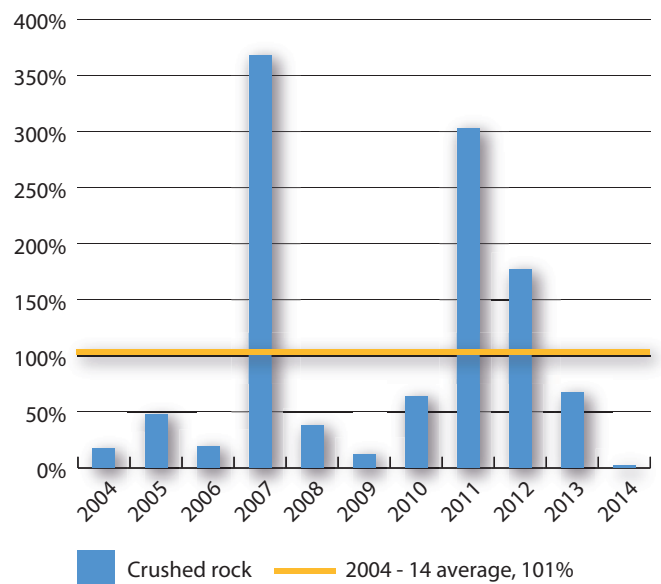


5.2: GB replenishment rates for sand & gravel and crushed rock. Source: MPA.

## Sand & gravel



## Crushed rock

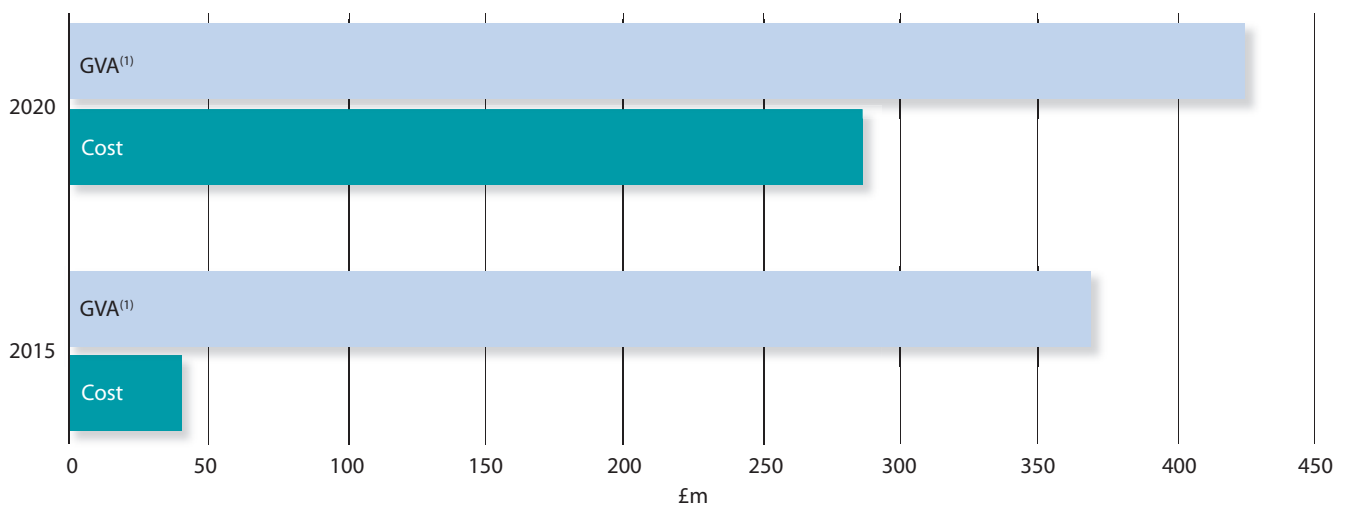


# 6 Taxation

The cumulative burden of environmental and planning related taxation and regulation on mineral products cuts deeply into the industry's GVA, and the pressures are also set to increase in the coming years. The industry is in the scope of the European Union Emissions Trading Scheme (EUETS), Climate Change Agreements (CCA) linked to the UK Climate Change Levy (CCL) and the Carbon Reduction Commitment Energy Efficiency Scheme (CRC), all of which are focused on carbon

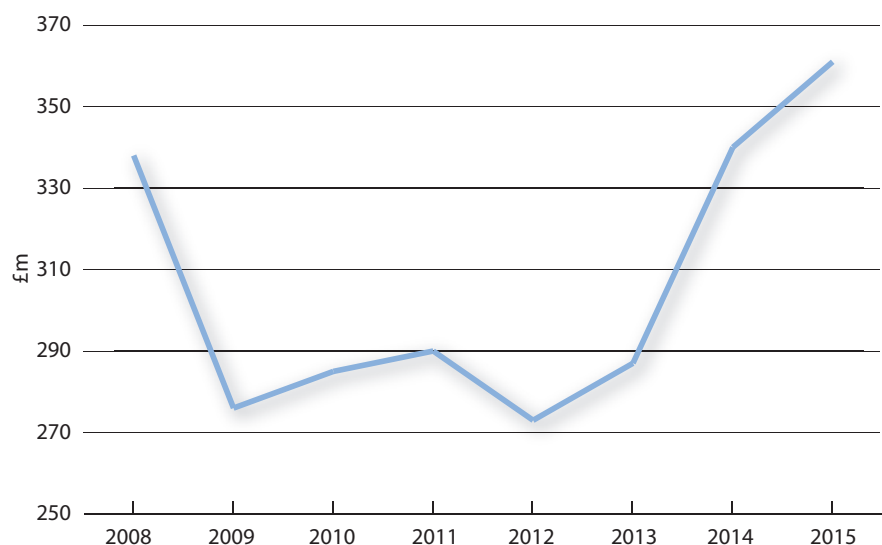
reduction. In addition, the industry has to manage the indirect impact of measures and associated costs related to the costs of generating and supplying the energy used by the industry. Climate change and energy measures in 2015 were equivalent to 11% of the GVA of the cement industry, but this proportion could increase to 67% by 2020 (from £41 million to over £287 million per annum). The annual cost of the Aggregates Levy alone reached £361m in 2015.

6.1: GVA and estimated cost of energy and climate change measures for the cement industry. Source: MPA.



<sup>(1)</sup> MPA believes the ONS estimate for the cement industry's GVA understates the industry's actual GVA. 2011 GVA for the cement industry was estimated by the MPA to be around £323. GVA for 2012 - 2014 follows cementitious sales trends. For 2015 -19, GVA is assumed to rise in line with MPA sales forecast. In 2020, GVA is assumed to grow in line with GDP trend growth of 2.3%.

6.2: Aggregates Levy payments to Governments. Source: HMRC, ABS.



# 7 Environment and sustainability

## 7.1 Recycling

Recycled & secondary materials now account for 28% of the GB aggregates market.

Recycled aggregates are the product of processing inert construction and demolition waste, asphalt planings and used railway ballasts into construction aggregates. These materials conform to European Aggregate standards and/or national specifications, and make a key contribution to total aggregates supply.

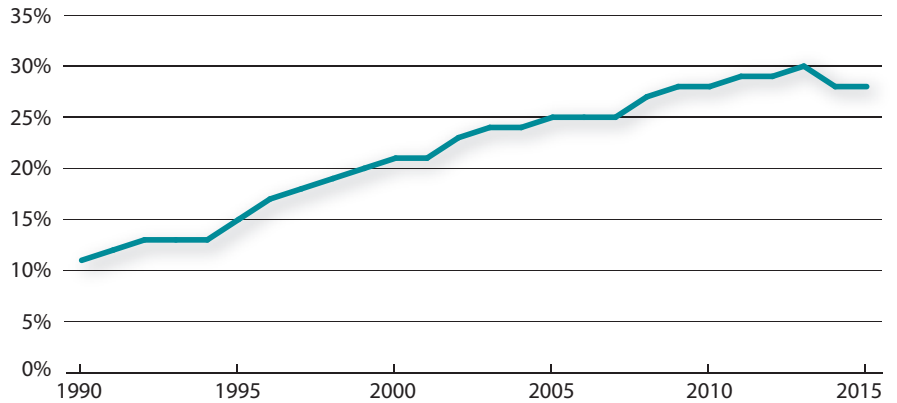
Secondary materials include blast furnace and steel slags. Other secondary aggregates include incinerator bottom ash aggregate (IBAA), furnace bottom ash (FBA), china clay sands, slate and crushed glass sand, supplementing total aggregates supply and used in the lower layers of road pavements and other construction applications.

The share of recycled & secondary materials in the total GB aggregates market is one of the highest in Europe; the European average stands at about 10%.

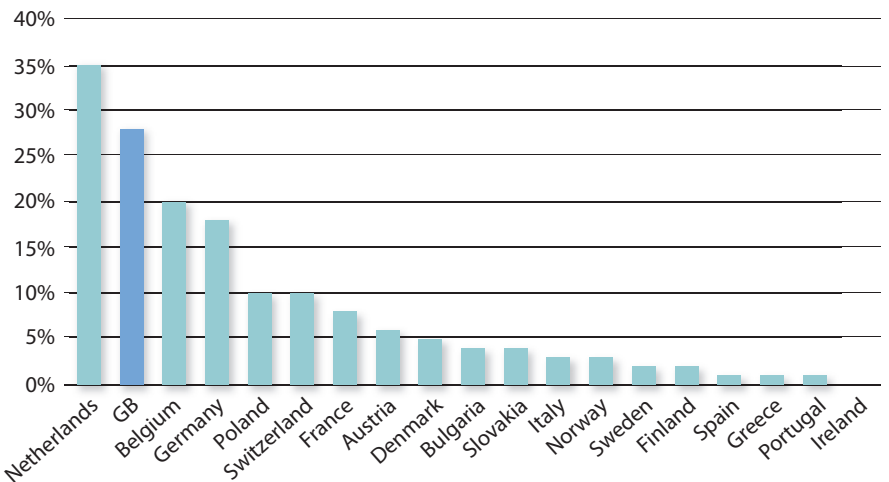
Sales of Portland cement are supplemented by the use of other cementitious materials including ground granulated blast furnace slag and fly ash. These cementitious materials are supplied either as a component of blended cements or directly to concrete manufacturing facilities.

7.1.a: **Share of recycled & secondary materials in total GB aggregates sales.**

Source: AMRI, MPA.

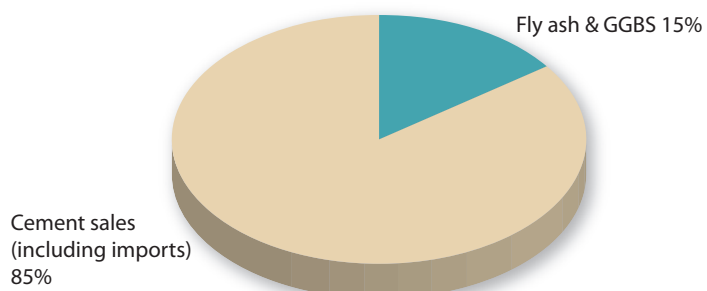


7.1.b: **Share of recycled<sup>(1)</sup> & secondary materials in total aggregates sales in 2014.** Source: UEFG, AMRI, MPA.



<sup>(1)</sup> Includes manufactured, recycled (fixed and mobile) and aggregates re-used on site.

7.1.c: **GGBS & fly ash in the MPA cementitious market, 2015.** Source: MPA.



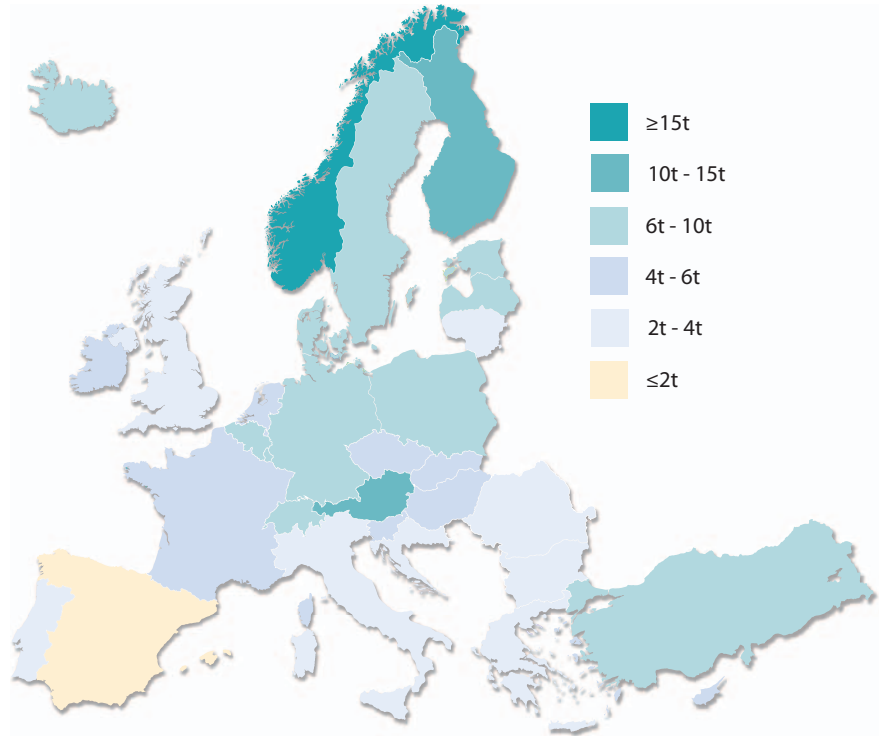
## 7.2.Resource efficiency

UK sales of both aggregates and cement per capita are relatively low and amongst the lowest in comparison with the rest of Europe. The charts below indicate that the use of aggregates and cement per capita is about 23% and 53% respectively below the European average.

<sup>(1)</sup> Includes primary, manufactured, recycled (fixed and mobile) and aggregates re-used on site.

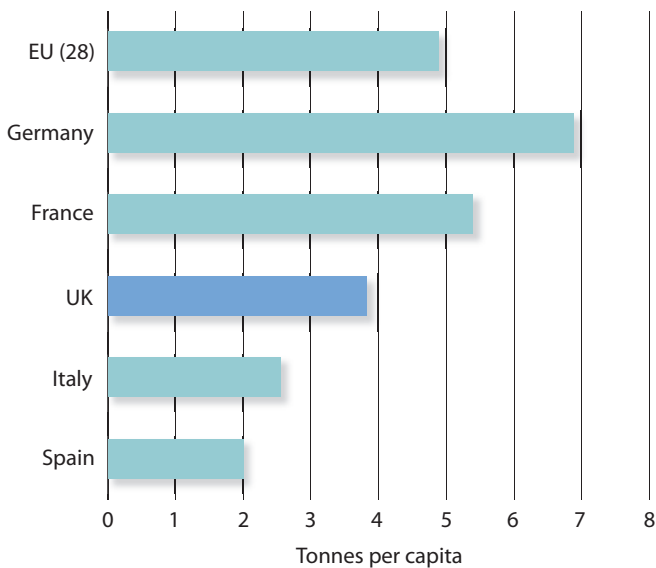
7.2.a: **Aggregates<sup>(1)</sup> production in Europe, tonnes per capita, 2014.**

Source: UEPG.



7.2.b: **Total aggregates<sup>(1)</sup> production per capita, 2014.**

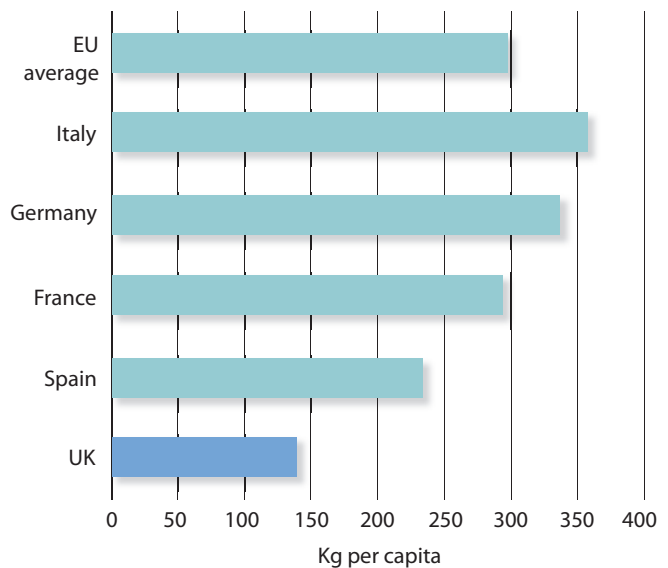
Source: UEPG.



<sup>(1)</sup> Includes primary, manufactured, recycled (fixed and mobile) and aggregates re-used on site.

7.2.c: **Cement consumption per capita, 2014.**

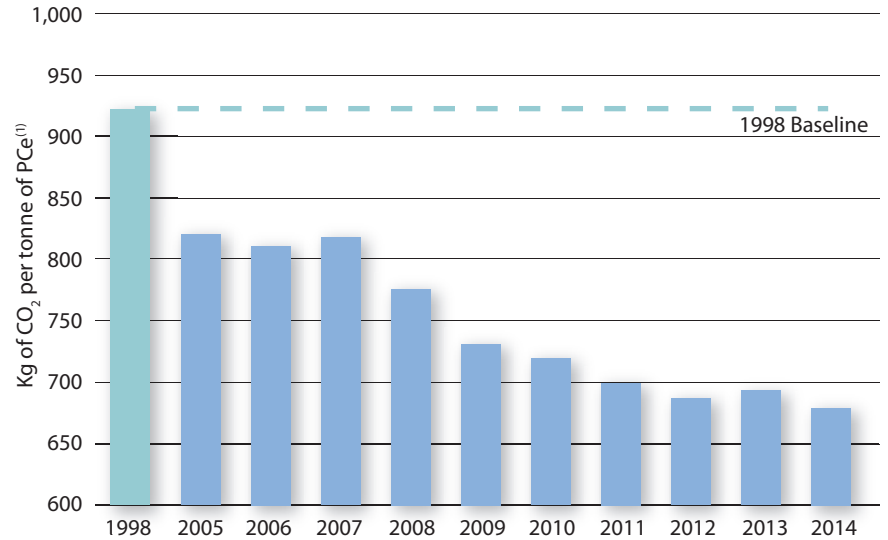
Source: ERMCO.



### 7.3 Carbon emissions

Cement manufacture is, by its nature, energy and carbon dioxide intensive. The UK industry has been a world leader in its carbon reduction drive to date, reducing direct CO<sub>2</sub> emissions by 30% between 1990 and 2014. UK manufacturers achieved this substantial decarbonisation through heavy investment and a progressive move toward using alternative waste-derived fuels. In 2014, the sector took 44% of its kiln fuel thermal input from waste derived sources, equivalent to leaving around 0.5 million tonnes of coal in the ground. In addition, cement manufacturers replaced almost 8% of their raw materials with waste derived alternatives. Following the publication of the MPA Cement greenhouse gas strategy, the UK Government, with input from the cement sector, published its Industrial Decarbonisation & Energy Efficiency Roadmaps to 2050 for cement last year.

7.3.a: Carbon dioxide in cement production. Source: MPA.



<sup>(1)</sup> Portland Cement Equivalent (PCe) is a normalising factor related to cement output often used by the cement industry, which enables a comparison of impacts, for example environmental, between sites whilst taking into consideration differing production methods, cement product types and movement of intermediate products. Includes non-kiln sites production from 2010 onward.

### 7.4 MPA National Nature Park

The minerals industry is uniquely placed to contribute to delivery of national and local biodiversity targets. At least 5,200 hectares of priority habitats have been created through the restoration of old quarries and management of land, the equivalent of at least five Richmond Parks. Also, at least a further 6,000 hectares of priority habitat is currently planned through the restoration of sites.

Opposite is a map of some of the best restored sites to visit, a nationwide network of quarries that have been restored for wildlife and which are accessible to the public. This initial map, which we are continually adding to, includes 65 sites around the country covering over 4,000 hectares, with a range of facilities including nature trails, viewing hides and visitor centres. Collectively they form MPA's National Nature Park.

You can view the map in more detail at: [www.mineralproducts.org/nature\\_map.htm](http://www.mineralproducts.org/nature_map.htm)

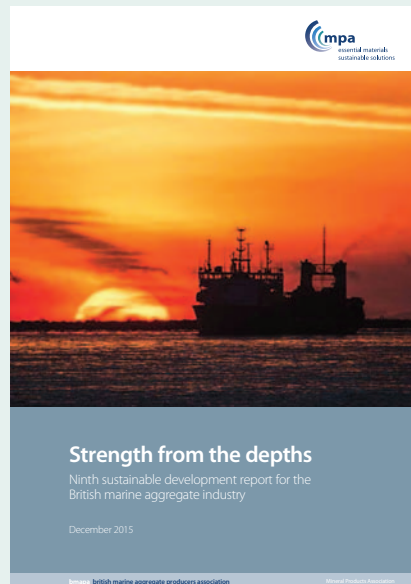




## 7.5 Sustainable Development Reports

### Links to Sustainable Development Reports

<http://www.mineralproducts.org/sustainability/reports.html>



# About the MPA

Annually, the industry supplies £20bn worth of materials and services to our economy. Industry production represents the largest materials flow in the UK, and is also one of the largest manufacturing sectors.

## Aim of the MPA

MPA members will be recognised and valued for supplying essential materials for a sustainable future in a manner that is economically viable and socially and environmentally responsible.

## Role of the MPA

MPA is the voice of the mineral products sector and represents and promotes its members in order to:

- Secure and maintain the “licence to operate” for the safe, sustainable and responsible supply of essential mineral products from the UK;
- Raise awareness of the industry, its activities and contribution to the economy and to protect and grow its markets;
- Influence the development of technical and environmental standards and codes of practice;
- Encourage innovation and the delivery of sustainable and responsible environmental product and market solutions;
- Advocate and influence the design and product choice of members’ products;
- Maintain existing and develop new markets which are stable, ‘level’ and certain and minimise cumulative impacts;
- Educate stakeholders to ‘Make the Link’ between the sources of mineral products and their use.

## MPA members are:

- Committed to the principles of sustainable development;
- Committed to achieving TARGET ZERO & ZERO HARM and raising skill levels;
- Committed to protecting and enhancing UK biodiversity;
- Committed to reducing carbon and other industrial emissions and maximising recycling of materials and high quality restoration of land and improving resource efficiency and contributing to the ‘circular economy’;
- Committed to the sustainable use of their products by end users;
- Socially and environmentally responsible suppliers of essential materials;
- Valuable and active members of their communities particularly in rural areas;
- Able to provide a range of career opportunities and career development and respond to skills shortages;
- Innovative and share good and best practice, particularly in health and safety and sustainable development.

# MPA members

## Producer, associate and affiliate members as of May 2016

The Mineral Products Association (MPA) is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries. With the recent addition of British Precast and the British Association of Reinforcement (BAR), it has a growing membership of 480 companies and is the sectoral voice for mineral products. MPA membership is made up of the vast majority of independent SME quarrying companies throughout the UK, as well as the nine major international and global companies. It covers 100% of GB cement production, 90% of aggregates production, 95% of asphalt and over 70% of ready-mixed concrete and precast concrete production. In 2015, the industry supplied £20bn worth of materials and services to the construction and other industries, with a total turnover of £495bn. Industry production represents the largest materials flow in the UK economy and is also one of the largest manufacturing sectors. For more information visit: [www.mineralproducts.org](http://www.mineralproducts.org)

### MPA producer members

#### England & Wales

Aggregate Industries UK Ltd  
Albion Stone plc  
Allen Newport Ltd  
Ballast Phoenix  
Bathgate Silica Sand Ltd  
Bath Stone Group  
Bestco Surfacing Ltd  
Black Mountain / De Lank Quarry Ltd  
Borough Green Sandpits Ltd  
Breedon Aggregates  
Brett Group  
Brice Aggregates Ltd  
Britannia Aggregates Ltd  
Bromfield Sand & Gravel Co Ltd  
Burlington Slate Ltd  
Cardigan Sand & Gravel Co Ltd  
Casey Group Ltd  
CEMEX UK  
Chambers Runfold  
Colas Ltd  
Cormac Solutions Ltd  
Cornish Lime Company Ltd

CPI Mortars Ltd  
Day Group Ltd  
Deme Building Materials Ltd  
Dunhouse Quarry Co  
Erith Haulage Company Limited  
Eurovia Roadstone  
F M Conway Ltd  
Ferns Group  
Forest Pennant  
Francis Flower  
Gallagher Group Ltd  
G.D. Harries & Sons Ltd  
GRS Roadstone Limited  
Grundon Sand & Gravel Ltd  
H Sivyer (Transport) Ltd  
H.H. & D.E. Drew  
H Tuckwell & Sons Ltd  
Hanson UK  
Harleyford Aggregates Ltd  
Harsco Metals Group Limited  
Hills Quarry Products Limited  
Holderness Aggregates Ltd  
Hope Construction Materials  
Hugh King & Co  
Hutton Stone Co Ltd  
Imerys Minerals Ltd  
J & J Franks Ltd  
J Clubb Ltd  
J.J. Prior Limited  
J Wainwright & Co Ltd  
John Carr (Liverpool) Ltd  
J Mould (Reading)  
John William Sutherland Ltd  
JPE Holdings Ltd  
Kerneos Ltd  
Lhoist UK Ltd  
Lovell Stone Group  
Mansfield Sand Co Ltd  
Marchington Stone  
Marshalls plc  
Midland Quarry Products  
Moorhouse Sand & Gravel Pits  
Moreton C Cullimore (Gravels) Ltd  
Morris & Perry (Gurney Slade) Ltd  
Myers Group  
Northumberland Quarries  
O'Donovan Waste Disposal Ltd  
Portland Stone Firms Ltd  
R Collard Ltd

R.J.D. Ltd  
Rotherham Sand & Gravel Co Ltd  
S Walsh and Sons  
Salop Sand & Gravel Supply Co Ltd  
Sea Aggregates Ltd / Euromin Ltd  
Sibelco UK  
Singleton Birch Ltd  
Smith & Sons (Bletchington) Ltd  
Springfield Farm Ltd  
SRC Aggregates  
SSG Quarries  
Syreford Quarries  
Tarmac  
TJ Transport Ltd  
Tradstocks Natural Stone  
Trefign Quarries Ltd  
Tudor Griffiths Group  
United Asphalt Ltd  
United Recycled Aggregates Limited  
Volker Dredging Ltd  
W Clifford Watts Ltd  
Wildmoor Quarry Products  
Woodkirk Stone

### British Precast

#### Product groups

Aircrete Products Association  
Architectural & Structural Precast Association  
Box Culvert Association  
British Precast Stone Association  
Concrete Block Association  
Concrete Pipeline Systems Association  
Interlay (Affiliation)  
Interpave  
Modern Masonry Alliance (Affiliation)  
Precast Flooring Federation

### British Precast

#### Full members

ABM Precast Solutions Limited  
Acheson & Glover Precast Limited  
ACP (Concrete) Limited  
Aggregate Industries (UK) Limited  
Amber Precast Limited  
Banagher Precast Concrete Ltd  
Barcon Systems Limited  
Barnetts of Buglawton  
Besblock Limited

Bison Manufacturing Limited  
 Blanc de Bierges  
 Breedon Aggregates Scotland Ltd  
 Brett Landscaping & Building Products  
 Broome Bros (Doncaster) Limited  
 CEMEX  
 Charcon Construction Solutions  
 CCP Building Products Ltd  
 Collier & Henry Concrete (Floors) Limited  
 Cornish Concrete Products Limited  
 CPM Group Limited  
 Creagh Concrete Products Limited  
 Cross Concrete Flooring Ltd  
 Decomo UK Limited  
 Delta Bloc UK Limited  
 E & JW Glendinning Limited  
 Ebor Concretes Limited  
 Elite Precast Concrete Limited  
 Evans Concrete Products Limited  
 F P McCann Limited  
 Forterra Building Products Ltd  
 Forticrete Limited  
 H+H UK Limited  
 Hillhouse Quarry Group Ltd  
 Interfuse Limited  
 Jordan Concrete Ltd  
 Laird Bros (Forfar) Ltd  
 Lignacite (Brandon) Ltd  
 Litecast Limited  
 Longley Concrete Ltd  
 Marshalls plc  
 Milton Precast  
 Mona Precast (Anglesey) Limited  
 Naylor Concrete Products Limited  
 Newlay Concrete  
 Patersons of Greenoakhill Ltd  
 Plasmor Limited  
 Premium Concrete Products Ltd  
 Quinn Building Products Limited  
 Robeslee Concrete Company Limited  
 S Morris Limited  
 Sellite Blocks Limited  
 Skene Group Construction Services Ltd  
 Stanton Bonna Concrete Limited  
 Sterling Services Limited  
 Stocks Blocks Limited  
 Stowell Concrete Limited  
 Supreme Concrete Limited  
 Tarmac Building Products Ltd  
 Techrete Limited  
 Thakeham Tiles Limited  
 Thomas Armstrong Group  
 Thorp Precast Limited  
 Townscape Products Limited  
 TT Concrete Products Limited  
 WDL (Concrete Products) Ltd  
 William Rainford (Holdings) Limited

## **MPA associate members**

### **England & Wales**

ABB Ltd UK  
 Addax International Ltd  
 Air Products PLC  
 Ammann Equipment Ltd  
 Anglian Aggregate Bagging Co Ltd  
 Archaeological Research Services Ltd  
 Aspen Advisory Services Ltd  
 Babcock International Group  
 Banner Contracts (Halnaby) Ltd  
 BASF Construction Chemicals (UK) Limited  
 BDS Marketing Research Ltd  
 Berrymans Lace Mawer  
 Birketts Solicitors  
 BPP Consulting  
 Brigade Electronics Plc  
 British Sugar plc  
 Burges Salmon LLP  
 Carter Jonas LLP  
 Cathay Pigments (UK) Ltd  
 Chaselet Ltd  
 Christeysn UK Ltd  
 Command Alkon Ltd  
 DB Cargo  
 DG Consultancy (Midlands) Ltd  
 David Ball Group  
 Davies Planning Ltd  
 DLA Piper UK LLP  
 Dustcan  
 EA Ltd  
 EIS Property  
 Endeco Technologies Ltd  
 Envireau Water  
 EPC-UK  
 ESI Limited  
 Finning (UK) Ltd  
 Firstplan  
 Foot Anstey LLP  
 Freeth Cartwright LLP  
 French Jones  
 Future Industrial Services  
 Gerald Eve LLP  
 Golder Associates (UK) Ltd  
 Grace Construction Products Ltd  
 G V A Grimley  
 Hafren Water  
 Hargreaves (UK) Services Ltd  
 Hewitt Robins International Ltd  
 Howes Percival LLP  
 Huntsman Pigments  
 J C Bamford Excavators Ltd  
 Jenco Consulting Ltd  
 Kingsbridge Risk Solutions Ltd  
 KJ Services Limited  
 Knights Professional Services Ltd  
 Land & Mineral Management Ltd  
 Lanxess Ltd  
 Marubeni-Komatsu Ltd

Matthews & Son Chartered Surveyors  
 Mentor Training Solutions Ltd  
 Mineral Products Qualifications Council  
 Mineral Services Ltd  
 MJCA  
 Neil Beningfield & Associates Ltd  
 ORICA Europe Ltd  
 PDE Consulting Ltd  
 Pinsent Masons LLP  
 Port of Tilbury London Ltd  
 Prince Minerals Ltd  
 Procter Johnson  
 ProSpare Ltd  
 PQ Silicas UK Limited  
 Rema Tip Top Industry UK Ltd  
 Response Engineering  
 Rettenmaier UK Ltd  
 Richard Fox & Associates Ltd  
 Savills (L&P) Ltd  
 SERAC UK  
 Siemens  
 Silkstone Environmental Ltd  
 SLR Consulting Ltd  
 Speciality Minerals  
 Spillard Safety Systems Ltd  
 Stephens Scown  
 Stocksigns  
 Tata Steel  
 The Crown Estate  
 Thrings LLP  
 TLT Solicitors  
 UK Quality Ash Association  
 Walters Group  
 Whitwick Engineering  
 Wirtgen Limited  
 WYG Environment Planning Transport Ltd

## **British Precast**

### **Associate members**

Adomast Manufacturing Ltd  
 Advantage Precast  
 BASF Construction Chemicals  
 BDS Marketing Research Ltd  
 Besser Company  
 Bianchi Casseforme SRL  
 BRE  
 C&CA Cement & Concrete Associates Ltd  
 Canadian Precast Institute  
 Carbon8 Aggregates Ltd  
 Caswick Ltd  
 Cathay Industries Ltd  
 Cement and Concrete Association of New Zealand  
 Cenin Limited  
 Christeysn UK Ltd  
 Chryso UK Ltd  
 Concrete Manufacturers Association - South Africa  
 Concrete Technology Ltd

Conspare Ltd  
Construction Fixing Systems Ltd  
Construx BUBA  
Coote Engineering Ltd  
CPI Worldwide  
CSM Thermomass  
David Ball Group Plc  
Doncaster College  
Dundee College  
Ecoratio Europe B.V  
EKC Systems Ltd  
Elematic Oyj  
Elkem Materials Ltd  
Erico Europe BV (Pentair Group)  
Euro Accessories Limited  
Fosroc Limited  
GCP Applied Technologies Ltd  
Graceland Fixing Ltd  
GRS (Bagging) Ltd  
Halfen Limited  
Hanson Cement Limited  
Havscot Ltd  
Hendriks Precon B.V  
Hickman & Love (Tipton) Ltd  
Hope Cement Ltd  
Howard Taylor Consultants  
Huntsman Pigments  
Hydronix Ltd  
Identification Technologies Scotland Ltd  
Inter-Minerals  
Invisible Connections  
Isedio Ltd  
J & P Building Systems Limited  
Kingston University  
KVM Industrimaskiner A/S  
Lanxess Ltd  
Leading Edge Management  
Leeds Oil + Grease Co. Ltd (LOGCO)  
Longrake Spar Co Ltd  
Loughborough University  
Lytag Ltd  
Martek Industries Ltd  
Max Frank Ltd  
Megasteel Ltd  
Mentor Training Solutions Ltd  
Miers Construction Products Ltd  
Moulded Foams Ltd  
N R Richards Associates Ltd  
National Precast Concrete Association  
Australia  
National Precast Concrete Association USA  
Natural Cement Distribution Ltd  
Net-Temps Ltd  
Parex Ltd  
Patterns and Moulds Ltd  
PCE Limited  
Peikko UK Ltd  
PERI Ltd  
Precast Concrete Structures Limited  
Precast Construction Technology Ltd

Precast New Zealand Incorporated  
Precast/Prestressed Concrete Institute  
Pressvess  
Probst Handling Equipment  
Progress Group  
Prothious Engineering Services Pvt. Ltd  
PUK Ltd  
Resiblock Ltd  
RFA-Tech Ltd  
Rocan Products Ltd  
Saint Gobain Weber, Leca UK  
Search Consultancy  
Shuttlelift  
SIKA Ltd  
Simply Precast Accessories Ltd  
Spiroll Precast Services Ltd  
Strusoft UK  
T Grounds Associates  
Tarmac Cement & Lime Limited  
Tarmac Trading Limited  
Trelleborg Pipe Seals  
Trimble Solutions (UK) Ltd  
UK Certification authority for Reinforcing  
Steels (Cares)  
University College London  
University of Brighton  
University of Dundee  
University of Nottingham  
University of Sheffield  
University of Surrey  
University of Teesside  
University of the West of England  
University of the West of Scotland  
Waldeck Engineering Limited  
Yara UK Ltd

### **MPA affiliate members**

#### **MPA Scotland**

*NB Excludes major companies who are all members.*

Angle Park Sand & Gravel Co.  
Bonnar Sand & Gravel Ltd  
Breedon Aggregates Scotland Ltd  
The Geddes Group  
Hillhouse Quarry Company Ltd  
Laird Aggregates Ltd  
Leiths (Scotland) Ltd  
MacLeod & Mitchell (Contractors) Ltd  
McFadyens Contractors  
O-I Manufacturing UK Ltd  
Patersons of Greenoakhill Ltd  
Pat Munro (AIness) Ltd  
Tillicoultry Quarries Ltd  
Tinto Sand & Gravel Ltd  
W H Malcolm Ltd

#### **QPA Northern Ireland (QPANI)**

Acheson & Glover Limited  
Alpha Quarry Products Ltd

Armagh City Quarries  
B McCaffrey & Sons Ltd  
Barrack Hill Quarries  
Boville McMullan Ltd  
Campbell Contracts Ltd  
CES Quarry Products Ltd  
Colinwell Concrete Ltd  
Collen Brothers (Quarries) Limited  
Conexpo (NI) Limited  
Core Aggregates  
Creagh Concrete Products Limited  
Curtis Concrete Solutions Ltd  
Douglas Acheson  
F P McCann Limited  
G & G Ross  
George Crawford & Son  
Gibson Bros.  
Harold Graham  
Hughes Precast Products Ltd  
Irish Salt Mining & Exploration Co Ltd  
Irwins Quality Aggregates  
James Boyd & Sons (Carnmoney) Limited  
John McQuillan (Contracts) Limited  
Jordan Concrete  
Kilwaughter Chemical Co Ltd  
Lafarge Ireland Ltd  
Lagan Cement Company  
Lagan Cement Products Ltd  
Lagan Construction Materials Ltd  
Loughran Rock Industries  
Macrete Ireland  
Matthew Robinson & Son Concrete Products  
McGarrity Brothers Ltd  
Miskelly Brothers  
MW Johnston & Son Ltd  
Norman Emerson Group Limited  
Northstone Products Limited  
Omya UK Ltd  
P Clarke & Sons Limited  
P Keenan  
Patrick Bradley Limited  
Peter Fitzpatrick, Leod Quarries  
Premier Cement Limited  
Quinn Building Products Ltd  
R J Mitten & Sons  
Riddles Bros Limited  
Robinson Quarry Masters Limited  
RTU Ltd  
Stanley Bell & Sons Ltd Sand & Gravel  
Tarmac  
T H Moore (Contracts) Ltd  
Tobermore Concrete  
Tracey Concrete Limited  
Tullyraine Quarries Limited  
W & J Chambers Limited  
W J & H Crozier  
Whitemountain Quarries Limited

## Northern Ireland associates and affiliates

Astute Software Ltd (Affiliate)  
CDE Global Ltd (Affiliate)  
Cleavor Fulton Rankin Solicitors (Affiliate)  
ConveyorTek (Affiliate)  
Dennison Commercials Ltd (Affiliate)  
Finning (Affiliate)  
McLorinan Consulting Ltd (Affiliate)  
Newmill Planning Consultancy Ltd (Affiliate)  
Orica Blast & Quarry Surveys (Affiliate)  
Quarryplan (Affiliate)  
RHM Commercial LLP (Affiliate)  
Six-West Ltd (Affiliate)  
SLR Consulting (Ireland) Ltd (Affiliate)  
TBF Thompson (Affiliate)  
Ulster Industrial Explosives Limited (Affiliate)  
William Orbinson QC (Affiliate)  
White Young Green (Affiliate)  
Atlantic Bitumen (Associate)  
Tennants Bitumen (Associate)

## British Association of Reinforcement (BAR)

ArcelorMittal Kent Wire Limited  
BRC Ltd  
Celsa Steel (UK) Ltd  
Dextra Manufacturing - UK  
ERICO Europa (GB) Ltd  
Express Reinforcements Ltd  
Outokumpu Stainless Limited  
ROM UK Ltd  
RSJ Steels Ltd

## Refined Bitumen Association (RBA)

Nyas Bitumen  
Shell Bitumen  
Total Bitumen

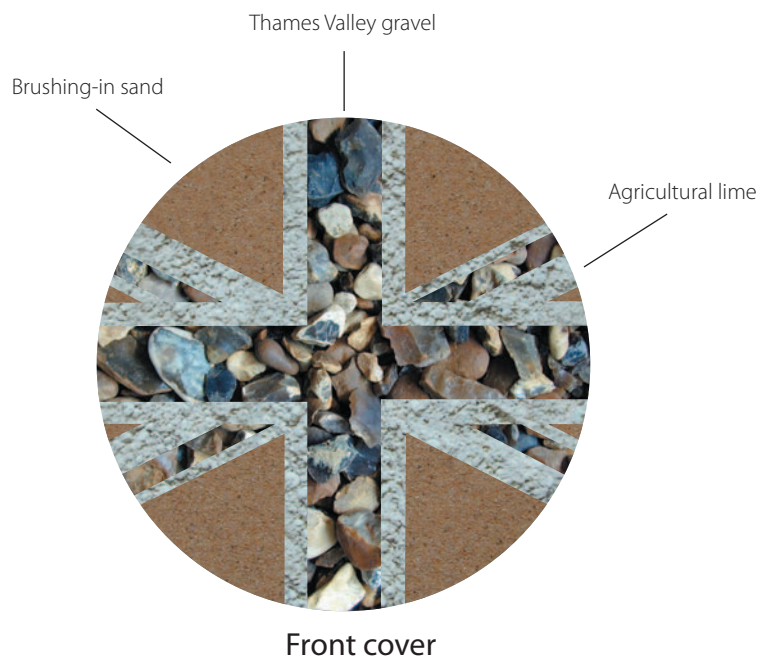
## For further information

### MPA's constituent bodies and affiliated organisations:

Mineral Products - Mineral Products Association: [www.mineralproducts.org](http://www.mineralproducts.org)  
Mineral Products - Northern Ireland, QPANI: [www.qpani.org](http://www.qpani.org)  
Cement - MPA Cement: <http://cement.mineralproducts.org>  
Precast Concrete - British Precast: [www.britishprecast.org](http://www.britishprecast.org)  
Ready Mixed Concrete – BRMCA: [www.brmca.org](http://www.brmca.org)  
Lime - British Lime Association: [www.britishlime.org](http://www.britishlime.org)  
Marine Aggregates - BMAPA: [www.bmapa.org](http://www.bmapa.org)  
Mortar - Mortar Industry Association: [www.mortar.org.uk](http://www.mortar.org.uk)  
Agricultural Lime - ALA: [www.aglime.org](http://www.aglime.org)  
Industrial Sand – SAMSA: [www.samsa.org.uk](http://www.samsa.org.uk)  
The Concrete Centre: [www.concretecentre.com](http://www.concretecentre.com)  
Reinforcing Steel - British Association of Reinforcement: [www.uk-bar.org](http://www.uk-bar.org)  
Asphalt Industry Alliance, in partnership with Eurobitume UK: [www.asphaltindustryalliance](http://www.asphaltindustryalliance)

### Other official websites used as data sources:

Minerals UK, British Geological Survey: [www.bgs.ac.uk/mineralsuk/mineralsYou/home.html](http://www.bgs.ac.uk/mineralsuk/mineralsYou/home.html)  
Annual minerals raised inquiry survey, DCLG: [www.gov.uk/government/collections/minerals](http://www.gov.uk/government/collections/minerals)  
Office for National Statistics, ONS: [www.ons.gov.uk/ons/index.html](http://www.ons.gov.uk/ons/index.html)  
Business, Innovation and Skills, BIS: [www.gov.uk/government/collections/building-mat](http://www.gov.uk/government/collections/building-mat)  
HM Revenues & Custom: [www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.asp](http://www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.asp)  
European Aggregates Association: [www.uepg.eu](http://www.uepg.eu)  
European Ready-Mixed Concrete Organisation: [www.ermco.eu/documents/home.xml?lang=en](http://www.ermco.eu/documents/home.xml?lang=en)  
Eurostat: <http://ec.europa.eu/eurostat/data/database>  
UK Minerals Forum: [www.ukmineralsforum.org.uk](http://www.ukmineralsforum.org.uk)  
Construction Products Association: [www.constructionproducts.org.uk](http://www.constructionproducts.org.uk)





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The Mineral Products Association is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries.

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