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Mineral Products

The foundation of sustainable growth

Profile of the UK Mineral Products Industry

2025 Edition

Mineral Products Association

Contents

PROFILE OF THE UK MINERAL PRODUCTS INDUSTRY, 2025 EDITION

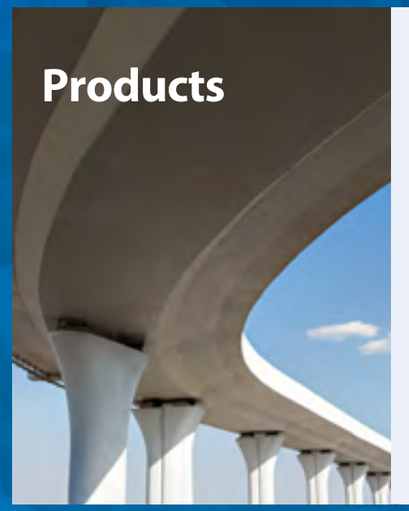
Introduction

This report provides an overview of the UK Mineral Products Industry – a sector that is fundamental to the UK economy and our quality of life. Drawing on the latest official statistics and industry information, it highlights the materials produced, the markets served, and the value generated.

Mineral products are the largest element of the construction supply chain, underpinning the delivery of homes, schools, hospitals, transport networks, energy systems, and water infrastructure. They also support essential manufacturing, agriculture, and environmental activities. In 2023, the sector supplied an estimated 397 million tonnes of minerals and manufactured mineral products. It generated £6.7 billion in value added directly and supported a further £253 billion in the supply chain, equivalent to 11% of the UK economy. The industry sustains highly productive employment and contributes to communities across the UK.

This report profiles each of the mineral products as represented by the Mineral Products Association, setting out their production, uses, regional distribution, and market trends. It also sets out key strategic issues for the industry, including the importance of securing a sustainable, long-term, mineral supply, enhancing circularity, supporting nature recovery, and meeting Net Zero targets.

The aim is to provide policymakers, industry stakeholders, and the wider public with a clear, accessible reference on the essential role this industry plays in building a sustainable, resilient, and prosperous UK.



AGGREGATES

AGRICULTURAL LIME

ASPHALT

CEMENT

DIMENSION STONE

INDUSTRIAL CLAYS

INDUSTRIAL LIME

INDUSTRIAL SAND

MARINE AGGREGATES

MORTAR

PRECAST CONCRETE

READY-MIXED CONCRETE

Notes: Data in this report includes both UK and Great Britain figures, depending on availability. While some datasets were available to 2024 at the time of analysis, others, including those from the Office for National Statistics, only extended to 2023 due to longer publication lead times. Based on information available as of July 2025.

The UK Mineral Products Industry: essential for the economy and daily life

Supplying the essential materials to keep Britain building, working and thriving

397 million tonnes
Over 1 million tonnes every day, the UK's largest material flow across the economy.

95% used in construction
Mineral products are the backbone of construction, while also essential for key industrial processes.

2,200 sites and plants nationwide network
A nationwide network to meet local and national needs.

£6.7 billion Gross Value Added (GVA)
Direct contribution to the UK economy, building the foundation of future growth.

£253 billion indirect GVA
Equivalent to 11% of the UK economy supported through the supply chain.

5.8 tonnes per capita
Average mineral products use per person each year.

89,000 jobs directly generated
Highly productive, well paid local jobs, nationwide.

£75,000 productivity per job
35% higher than the national average.

3.4 million jobs supported in supply chain
In construction, manufacturing, chemicals, food, pharmaceuticals and more.

Key Metrics (UK, 2023)

What the industry produces and why it matters

Extraction

- Limestone & Dolomite
- Igneous Rock
- Sandstone
- Quarried Sand & Gravel
- Marine-Dredged Sand & Gravel
- Clays
- Industrial Sand

Products

- Construction Aggregates
- Ready-Mixed Concrete
- Asphalt
- Precast & Concrete Products
- Cement
- Mortar
- Dimension Stone
- Lime
- China & Ball Clay
- Silica & Moulding Sand

End Use

Construction:
- Housing
- Other Buildings
- Transport Infrastructure
- Energy Generation
- Utilities
- Hospitals & Schools
- Factories & Warehouses
- Climate Mitigation

Non-construction:
- Glass
- Ceramics
- Metals
- Paper
- Chemicals
- Plastics
- Agriculture & Food
- Pharmaceuticals
- Water Filtration
- Emission Cleansing

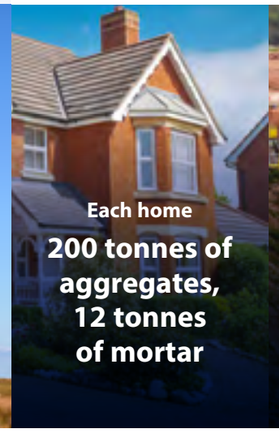
Sustainability snapshot

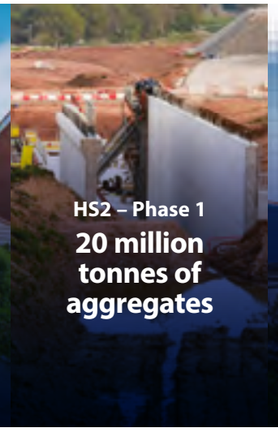
31%
of aggregates from recycled and secondary sources, amongst the highest rates in Europe

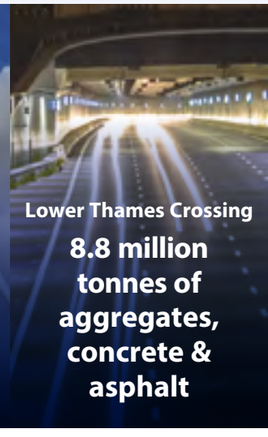
63%
reduction in CO_2 emissions in UK cement and concrete since 1990

2050
On the path to Net Zero by 2050

8,300 ha
At least 8,300 ha of natural habitat created through quarry restoration







1. The industry's contribution to the UK economy

A. Essential everywhere

The Mineral Products Industry consists of the extraction of mineral resources, and their processing and manufacture into products. Resources include igneous rock, limestone and dolomite, sandstone, dimension stone, sand & gravel, industrial sand, china clay and ball clay, while products include asphalt, cement, concrete (both ready-mixed and precast), industrial and agricultural lime, mortar and slag.

The industry is an essential enabling part of the UK economy. It directly drives economic growth through the products it produces and literally builds the foundations for all other industries to thrive through the construction of homes, schools, hospitals, workplaces, roads, railways, and other essential infrastructure for clean water, sanitation, connectivity and renewable energy. It is society's development needs that drives the demand for the industry's products. A strong domestic Mineral Products Industry is fundamental for developing UK infrastructure and improving living standards.

In 2023, the industry was responsible for the largest material flow in the UK economy, producing 397 million tonnes of minerals and mineral products, equivalent to 5.8 tonnes per capita (Table 1.1). These products accounted for the biggest share of goods transported by road (15% in 2023) and the second biggest share by rail (33% in 2024/25) (DfT, 2024; ORR, 2025).

95% of the industry's output is used to build, maintain and upgrade buildings and critical national infrastructure

Table 1.1 UK production of minerals and mineral products, 2023 (Million tonnes)

CONSTRUCTION USES		**378.4**
Aggregates		**264.4**
of which:	Crushed rock	131.8
	Sand & gravel – land won	44.8
	Sand & gravel – marine	13.5
	Recycled and secondary aggregates [a]	74.3
Cementitious		**8.6**
of which:	Cement	7.7
	Other cementitious materials (Fly ash, GGBS)	1.0
Ready-mixed concrete [b]		**57.9**
Asphalt		**24.4**
Concrete products		**22.4**
Mortar [c]		**3.2**
Building and dimension stone		**0.7**
NON-CONSTRUCTION USES		**18.3**
Limestone and dolomite [a, d]		**12.3**
including:	Industrial lime	1.1
	Agricultural lime	2.5
Industrial sand		**4.7**
Ball clay		**0.7**
China clay		**0.5**
ALL CONSTRUCTION AND NON-CONSTRUCTION USES		**396.7**

As the largest component of the construction supply chain, 95% of the industry's output is used to build, maintain and upgrade buildings and critical national infrastructure. Just under half of the industry's production came from the extraction of construction aggregates, i.e., quarried crushed rock and both quarried and marine-dredged sand & gravel, at a total of 190 million tonnes in 2023. This is nearly three times greater than total domestic production of energy minerals, at 69.9 million tonnes in 2023 (DESNZ, 2025a).

Beyond construction, the industry supplies raw materials and products to many other sectors that are also essential to everyday life. These include iron and steel manufacture, ceramics, paper, glass, food and pharmaceuticals, as well as agriculture and horticulture, water treatment, and emission cleaning for power stations.

The industry is overwhelmingly domestic: most minerals and products are produced and consumed within the UK, with limited exposure to international trade. There are however some notable exceptions: cement imports have steadily grown in the past 20 years, from 11% of the UK cement market in 2004 to 32% in 2023 (MPA Cement, 2025a). Over the same period, the trade balance for concrete products also shifted from a small surplus of £62 million in 2004 to a trade deficit of £364 million in 2023 (HMRC, 2025b). In contrast, exports accounted for 20% of total UK industrial lime production in 2024 (MPA Lime, 2025b), whilst smaller export volumes also exist for crushed rock, marine sand & gravel, dimension stone, and industrial clays.

[a] GB only. [b] Converted using 2.38 tonnes per cubic metre of ready-mixed concrete. [c] Includes an estimate for Northern Ireland. [d] Sales of limestone and dolomite for non-aggregates use.
Source: BGS, MPA.

PROFILE OF THE UK MINERAL PRODUCTS INDUSTRY, 2025 EDITION

B. Economic impact: value added, jobs, productivity

The Mineral Products Industry contributes to the UK economy in two main ways:

- **Directly, through the value it adds and the employment it generates within the sector itself.**
- **Indirectly, by enabling the industries that use its products to operate and grow.**

Economic contribution estimates are based on combined information from the Office for National Statistics and other industry sources. The scope includes mineral extraction and mineral product manufacturing, as described in Table 1.1, as well as a share of road freight (as mineral producers deliver most materials by road), and a share of road contracting activity carried out by asphalt producers.

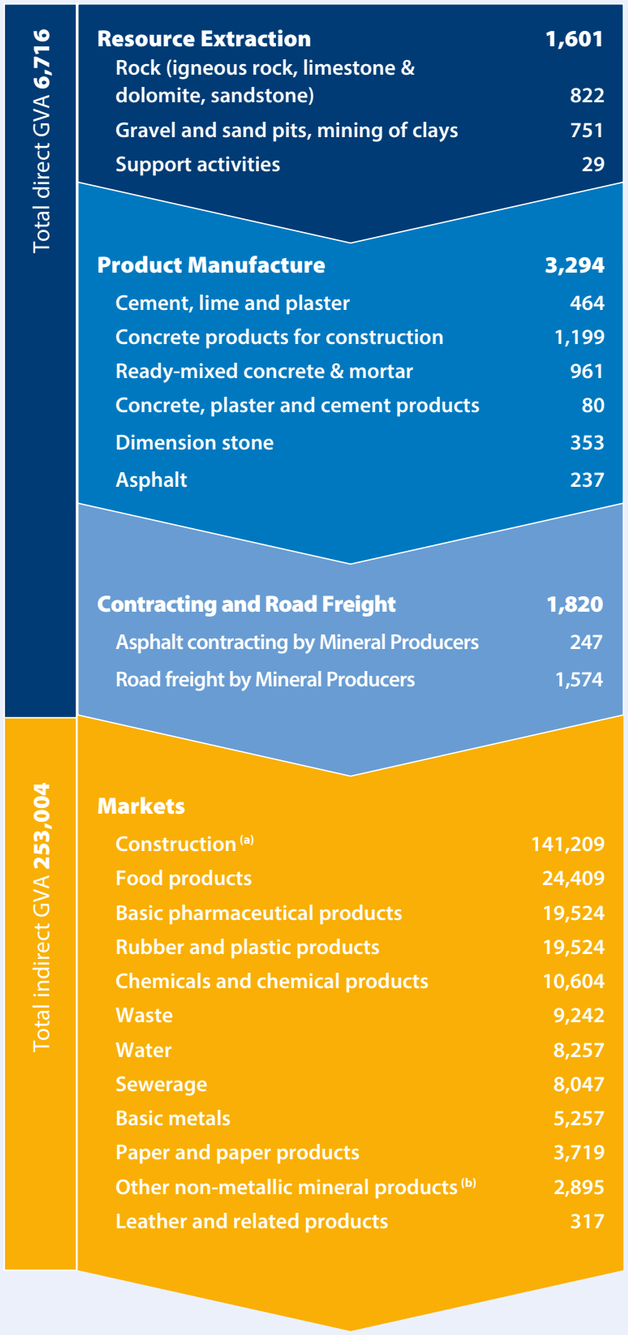
The Mineral Products Industry supports **£253 billion in GVA, 11% of the total UK economy**

In 2023, the Mineral Products Industry directly contributed over £6.7 billion in Gross Value Added (GVA) to the UK economy, with £18.4 billion in turnover (Figure 1.1).

In addition, beyond its own production, the industry plays an essential role in the supply chain for many sectors, supporting an estimated £253 billion in GVA downstream, equivalent to 11% of the total UK economy. For example, the industry is the single largest supplier to construction, which generated £141.5 billion in GVA in 2023 (including asphalt contracting).

The industry's largely indigenous nature also means that it supports local economies and communities across all regions and nations of the UK, providing well-paid, highly skilled jobs. Its network includes over 2,200 active sites, from quarries and wharves to manufacturing plants (Table 1.2). In 2023, the industry generated 89,000 jobs directly and supported a further 3.4 million jobs in its supply chain, including 2.2 million in construction alone. It is also a highly productive sector: each job generated an average of £75,000 in GVA in 2023, 35% higher than the national average of £55,000 (Figure 1.2).

Figure 1.1 GVA of the UK Mineral Products Industry in 2023 (£ million)



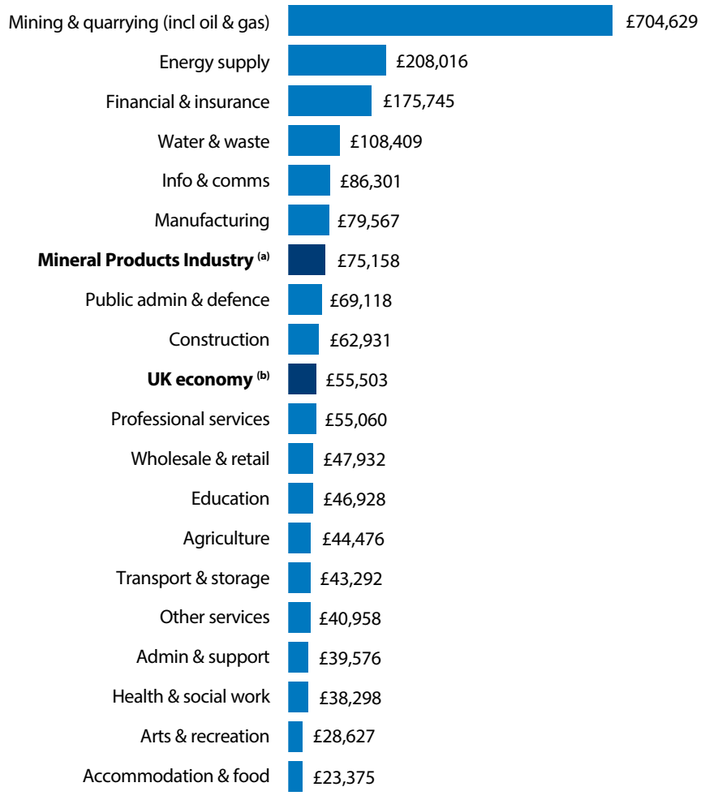
[a] Excludes the contracting work carried out by asphalt producers. Source: ONS, BGS, MPA.

[b] Excludes cement, lime and plaster, concrete and cement products, ready-mixed concrete, mortar, dimension stone and asphalt to avoid double-counting.

Table 1.2 Number of MPA member active sites and plant across the UK, 2024

Crushed rock quarries	**261**
Sand and gravel quarries	**250**
Depots and wharves	**165**
Railheads	**34**
Recycling plants	**128**
Cement plants and associated quarries	**34**
Ready-mixed concrete plants	**740**
Precast concrete plants	**179**
Lime quarries	**5**
Asphalt plants	**264**
Mortar plants	**44**
Dimension stone quarries	**38**
Silica sand quarries	**15**
Slag plants	**4**
Other minerals quarries	**39**
TOTAL	**2200**

Figure 1.2 Output per job by industry, 2023



(a) This is not an official ONS Standard Industrial Classification but reflects the range of activities undertaken by mineral products producers, as represented by the MPA. (b) Excludes real estate activities. Source: ONS, MPA.

PROFILE OF THE UK MINERAL PRODUCTS INDUSTRY, 2025 EDITION

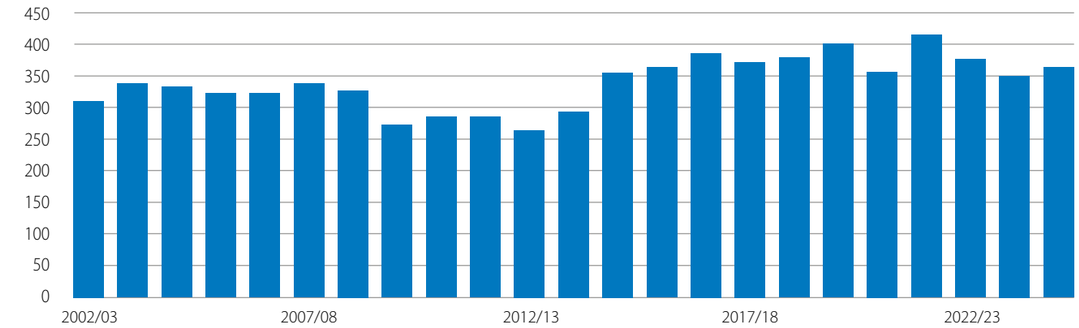
C. Fiscal contribution: taxes and levies

In addition to its direct economic contribution and employment impact, the Mineral Products Industry contributes significant tax revenues to the Exchequer. This includes corporation tax, employer National Insurance contributions, business rates and fuel duty.

The industry is also subject to sector-specific taxation, most notably the UK Aggregates Levy, introduced in 2002 as an environmental tax to encourage recycling and the use of by-products from other industries. The Levy was initially set at £1.60 per tonne, rising to £1.95 in 2008 and £2.00 in 2009. It remained frozen until April 2024, when indexation resumed.

As of April 2025, the rate is £2.08 per tonne. The Aggregates Levy has raised between £350-£400 million annually over the past decade, and a total of £7.8 billion since its introduction (Figure 1.3). The Scotland Act 2016 gave the Scottish Parliament the power to introduce a devolved tax, with the Scottish Aggregates Tax due to be introduced in April 2026.

Figure 1.3 Aggregates Levy payments to Government (£ million)



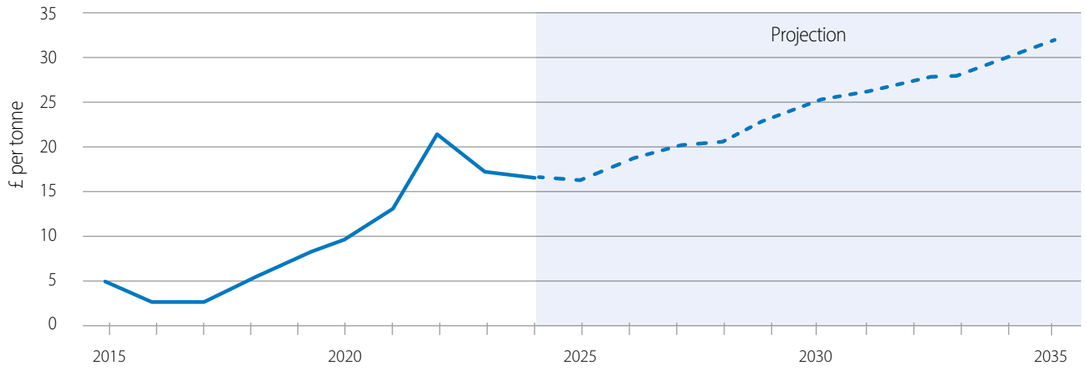
Source: HMRC.

The industry is also covered by a range of carbon and energy-related policy costs and reporting schemes, including:

- The UK Emissions Trading System;
- Climate Change Levy (CCL): Note that the cement and silica sand sectors voluntarily participate in the Climate Change Agreements scheme, which offer rebates on the CCL in return for meeting energy efficiency targets;
- Streamlined Energy and Carbon Reporting;
- The Energy Saving Opportunity Scheme.

In addition, policy measures to accelerate renewable energy deployment impose indirect costs on electricity bills. Energy intensive industries, such as cement and lime, receive exemptions but other mineral products producers do not. In 2024, climate change and energy policy costs for the cement sector were estimated at £16.61 per tonne of cement, totalling £121 million (Figure 1.4). These indirect costs are expected to rise, potentially exceeding £25 per tonne of cement by 2030.

Figure 1.4 Estimated cost of energy and climate change measures for the cement industry



Source: MPA.

2. Delivering national priorities: the role of mineral products

The Mineral Products Industry plays a foundational role in delivering the UK Government's and devolved administrations economic and policy ambitions. Its products underpin the construction and infrastructure for sustainable growth and productivity growth, raising living standards across the country, and addressing economic and national security.

From major national infrastructure projects to the delivery of homes, workplaces, public services and industrial capability, the industry supplies the essential raw materials that make these ambitions a reality. Without a healthy, secure domestic supply of mineral products, government policy goals in housing, transport, energy, defence and Net Zero cannot be achieved. The delivery and success of key strategic policy ambitions rely on the secure, sustainable and affordable supply of minerals and mineral products. These include:

The UK's modern industrial strategy 2025

Focusing on eight specific sectors estimated to have the highest growth potential (namely, advanced manufacturing, clean energy, creative industries, defence, digital and technologies, financial services, life sciences, and professional and business services), the UK Government's Modern Industrial Strategy recognises the importance of foundational industries in enabling growth across these priority sectors and the wider economy (HM Government, 2025a).

Construction and the supply chain, including cement and concrete, are rightly categorised as foundational, critical to the Strategy's prospects for success, but future considerations should also include the essential role of domestic mineral extraction – for which the UK currently has no long-term strategy. Such strategy should include the sustainable supply of construction aggregates and industrial minerals, which are not only essential for these eight sectors to operate and achieve their potential through infrastructure, housing and decarbonisation efforts, but also for wider economic resilience and national security.

The link between minerals and national security is often missed in broader discussions about readiness and supply chain resilience. Significant volumes of domestic supplies of construction aggregates, concrete and asphalt will be required for the delivery of port expansion and increased defence manufacturing and housing capability. Both industrial sand and lime play a vital role through its use in metal casting for military components. The supply of these minerals and mineral products should not simply be assumed, but strategically planned, monitored and managed.

UK infrastructure: a 10 year strategy

The UK Government outlined a pipeline worth £725 billion of funding for economic and social infrastructure to support the delivery of its Industrial Strategy, which will require significant volumes of materials for roads, railways, airports, ports, energy generation and distribution, water networks, and flood defences (HM Government, 2025b).

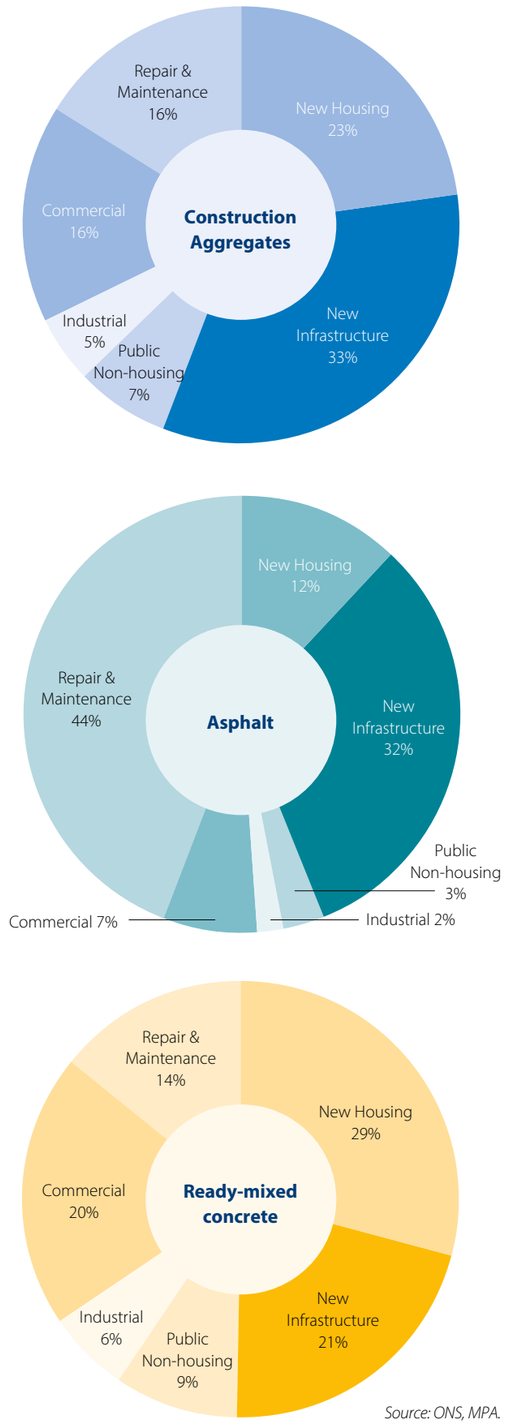
Around a third of construction aggregates and asphalt demand came from infrastructure construction in 2024, and around a fifth for ready-mixed concrete (Figure 2.1). The following examples illustrate the significant material requirements that can arise from major infrastructure projects, which add and compete with baseload demand from the wider construction sector:

- High Speed 2 (Phase 1): 20 million tonnes of aggregates for fill and concrete components.
- Sizewell C: 5.1 million tonnes of concrete and a further 268,000 tonnes of sand and gravel for construction and surfacing.
- Hinkley Point C: 3 million tonnes of concrete.
- Lower Thames Crossing: 3.6 million tonnes of aggregates, 4.3 million tonnes of concrete, and 900,000 tonnes of asphalt.
- Heathrow Third Runway: While there are no material estimates available for the new runway, Terminal 5, which opened in 2008, used a total of 2.9 million tonnes of concrete. At least similar volumes are expected if this project is progressed.
- Offshore wind (e.g., Hornsea 3, Berwick Bank, Celtic Sea): Each turbine foundation requires 15,000 tonnes of concrete, depending on design, whilst each blade is composed of 30% industrial sand.
- Road construction: A typical mile of motorway uses around 20,000 tonnes of aggregate, asphalt, and concrete. The A14 upgrade in Cambridgeshire used 730,000 tonnes of asphalt alone.
- Solar energy infrastructure: Silica sand and industrial mineral lime products are inputs to the manufacturing of solar panels; silica sand specifically for the silicon used in photovoltaic cells, and industrial lime in making glass.

These examples illustrate the scale and diversity of material requirements associated with the UK's infrastructure plans.

£725 billion of funding for economic and social infrastructure

Figure 2.1 Mineral products end use by construction sector in Great Britain, 2024



Source: ONS, MPA.

Housing delivery

Minerals and mineral products are also essential for building new homes and maintaining the existing housing stock. In 2024, housebuilding accounted for 23% of total aggregates demand and 29% of ready-mixed concrete (Figure 2.1).

The UK Government has committed to delivering 1.5 million new homes in England by 2029, supported by planning reforms. Housing is devolved, with each administration setting its own targets: Scotland aims to deliver 110,000 affordable homes by 2032; Wales has committed to 20,000 new low-carbon social homes by 2026, alongside an estimated need for 110,000 new homes between 2019 and 2039 to address historic shortfalls; and Northern Ireland plans to deliver 100,000 new homes by 2039. Taken together, these programmes highlight the scale of housing need across the UK and the associated long-term demand for construction materials.

While there is debate around the feasibility of meeting these housing ambitions within their respective timeframes, delivering the required uplift in annual output across all nations would place significant pressure on mineral products supply. This increase in demand would coincide with substantial material requirements from major infrastructure programmes and wider construction activity.

As housing need grows, so too does the requirement for a secure and sustainable supply of construction materials. The Mineral Products Industry will be a critical enabler of delivery across the UK, and ensuring that industry capacity keeps pace with long-term housing targets is essential to turning policy commitments into homes on the ground.

200 tonnes per home

Each new home requires around 200 tonnes of aggregates – with additional materials needed for utilities, access roads, and supporting infrastructure.

Delivering growth

Government policy ambitions for housing and infrastructure, alongside related commitments to energy security and climate neutrality, will require significant volumes of construction materials over the next 10-15 years. Minerals such as aggregates are fundamental to achieving these goals, supporting economic growth, the transition to Net Zero, and meeting ongoing construction and industrial needs.

MPA research (MPA, 2022a) projects that annual demand for construction aggregates could rise to over 320 million tonnes by 2035, with cumulative demand reaching between 3.8 and 4.1 billion tonnes between 2022 and 2035. This compares with 3.2 billion tonnes supplied in the previous 14-year period to 2021. These projections reflect construction growing in line with historical trends, yet additional housing and infrastructure ambitions set out by government could push demand even higher.

To fulfil its policy objectives, government must ensure that the foundational industries which enable delivery, such as the supply of essential minerals and mineral products, are supported. However, the availability of these materials is often taken for granted.

One key concern is the ongoing decline in permitted reserves of primary aggregates; a trend observed over the past two decades (see section 4 of this report). This reflects a lack of strategic, long term mineral planning, risking future constraints on resource availability.

Around **4 billion tonnes** of construction aggregates will be needed by 2035 to supply our needs.

If current trends continue, meeting the UK's growing need for minerals and mineral products will become increasingly difficult during the 2030s. Their supply cannot be assumed: it must be planned, monitored, and managed through a strategic and long-term approach. This is essential to ensure the right materials are available, in the right place, at the right time, and in the most cost efficient and sustainable way.

Such an approach does not need to start from a blank page. An industry-led UK Minerals Strategy already exists (MPA, 2022b). It sets out a vision for sustainable mineral supply over the next 25 years. It is now critical to reinforce the connection between the UK's ambitions for housing, infrastructure, and decarbonisation – and the raw materials that will make them possible.

3. Sustainable foundations: resource use, climate action and nature recovery

A. Resource efficiency

The Mineral Products Industry responds to, rather than drives, demand - supplying the essential raw materials and products required by construction and manufacturing across the UK. This demand is shaped by broader economic conditions, including infrastructure investment, regeneration programmes, and population growth.

Despite its central role in the built environment, annual domestic per capita consumption of mineral products remains relatively low compared to European norms:

- Construction aggregates: 3.6 tonnes per capita (Figure 3.1)
- Cement: 200 kilograms per capita (Figure 3.2)

One indicator of resource efficiency is the aggregates intensity, i.e., the tonnage of aggregates used per £m of construction output. This metric is calculated using aggregate sales (from primary and recycled sources) relative to the total value of construction output, including both new work and repair and maintenance.

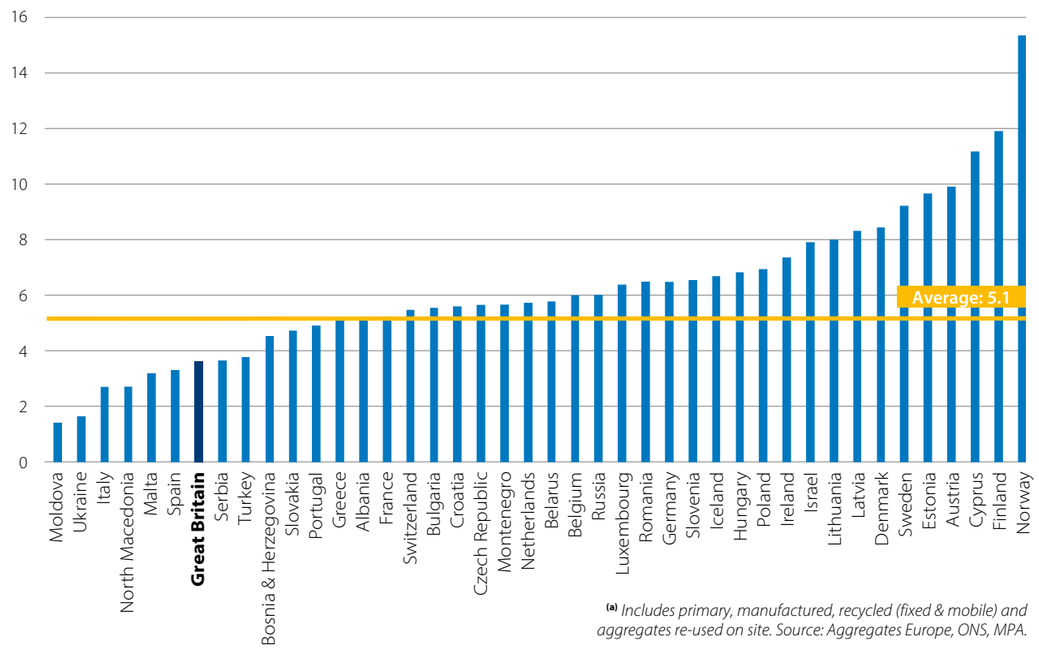
As shown in Figure 3.3, the aggregates intensity in construction has declined steadily over the past 25 years, falling from 1.9 million tonnes per £m spent in construction in 1997 to 1.1 million tonnes in 2024. This represents an average annual reduction of 1.9%. Notable step-changes occurred in 2002-03 and 2008-10, likely reflecting improved efficiency in the manufacture and use of mineral products such as concrete and asphalt.

More recently, however, aggregates intensity has plateaued, with only marginal reductions seen over the past 15 years. This trend may reflect structural limits to further improvement. For example:

- A significant share of aggregates demand remains in unbound applications (e.g. bulk fill), where there are fewer opportunities for material substitution or process efficiencies.
- The type and scale of construction work, such as infrastructure renewal or housing development, also affects the material intensity of output.

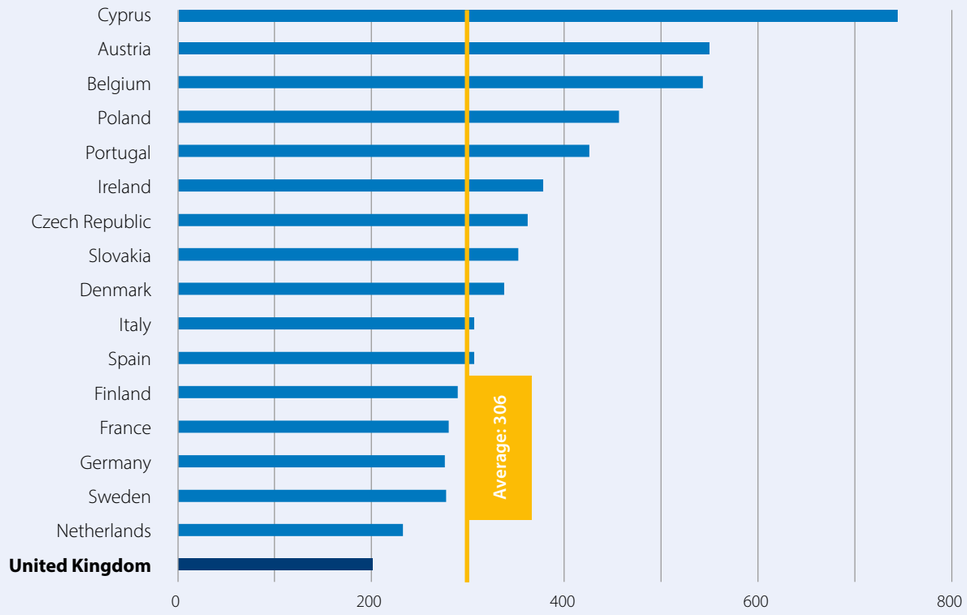
These factors suggest that while past efficiency gains have been significant, future reductions may be more incremental.

Figure 3.1 Total aggregates [a] supply, 2023 (tonnes per capita)



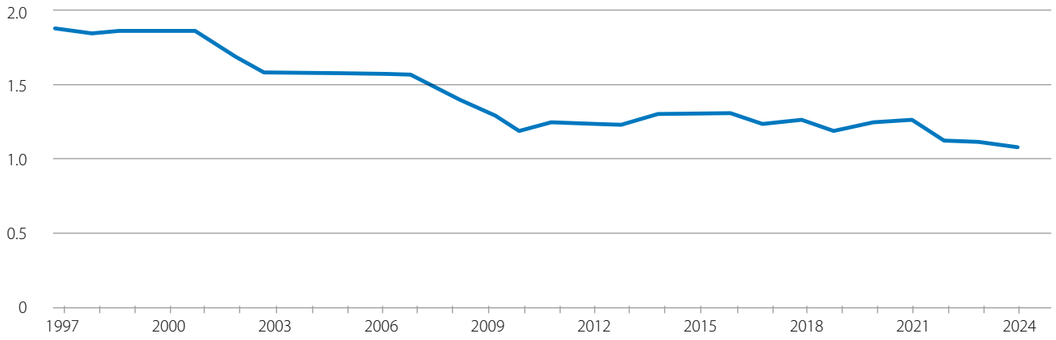
[a] *Includes primary, manufactured, recycled (fixed & mobile) and aggregates re-used on site. Source: Aggregates Europe, ONS, MPA.*

Figure 3.2 Cement consumption, 2023 (kilogrammes per capita)



Source: ERMCO, World Bank.

Figure 3.3 Aggregates intensity of construction in Great Britain (million tonnes per £m spent in construction)



Source: ONS, MPA.

B. Recycling and resource recovery

In addition to the extraction of primary aggregates from quarries and marine dredging, a significant share of construction materials is supplied through recycled and secondary sources, contributing to a more circular and resource-efficient economy.

Recycled aggregates are produced from inert Construction, Demolition and Excavation Waste (CDEW). Secondary aggregates are derived from other industrial, production or extractive processes, including:

- Sand and crushed rock from ball clay and china clay production, and slate waste.
- Industrial by-products – including blast furnace slag, steel slag, incinerator bottom ash (IBA), furnace bottom ash (FBA), coal-derived fly ash, and crushed glass sand.

These materials are used as substitutes for primary aggregates in a variety of construction applications. Recycled and secondary aggregates are commonly used in:

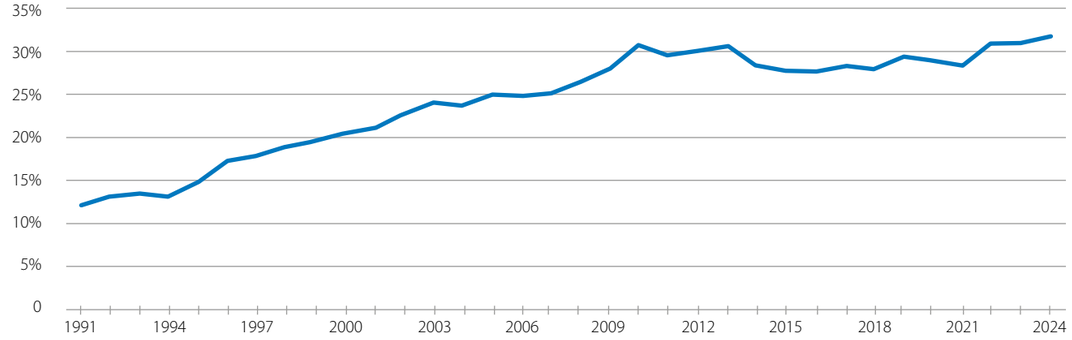
- The lower layers of road pavement construction
- Some higher-value road surfacing applications
- Concrete manufacture
- A range of other uses, including bulk fill and landscaping

For example, Portland cement use is also supplemented by other cementitious materials, such as ground granulated blast furnace slag and fly ash. These materials are either blended with cement at the point of manufacture or supplied directly to concrete producers for on-site blending. Asphalt also provides sustainable solutions, as it is 100% reusable or recyclable back into new asphalt and can incorporate materials from other recycling streams.

Over the past 15 years, recycled and secondary aggregates have accounted for around 30% of total aggregates supply in Great Britain, reaching an estimated 74.7 million tonnes in 2024 (Figure 3.4). This performance places Britain among the international leaders in the use of recycled and secondary materials (Figure 3.5).

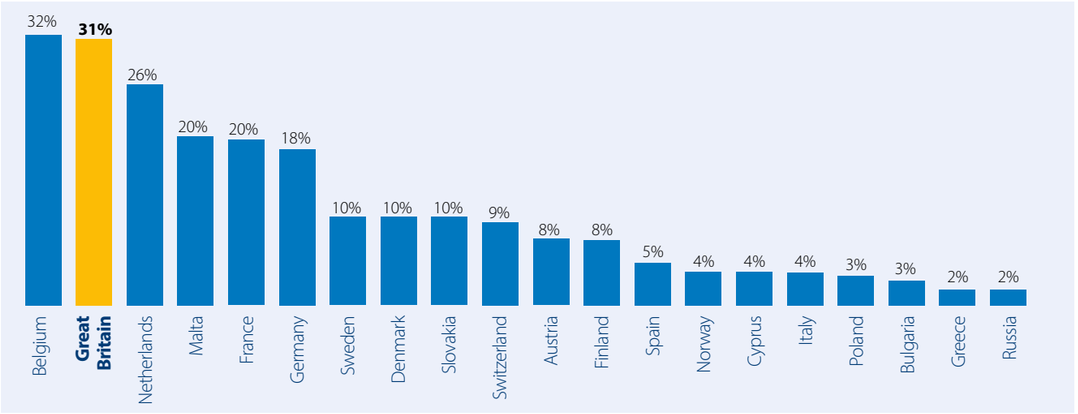
Beyond the data produced by MPA, there is currently no consistent national dataset on the availability and use of recycled aggregates in the UK. This data gap limits the ability to track progress and develop evidence-based policies to support national goals around circularity, sustainability, and decarbonisation.

Figure 3.4 Share of recycled and secondary materials in total aggregates supply in Great Britain



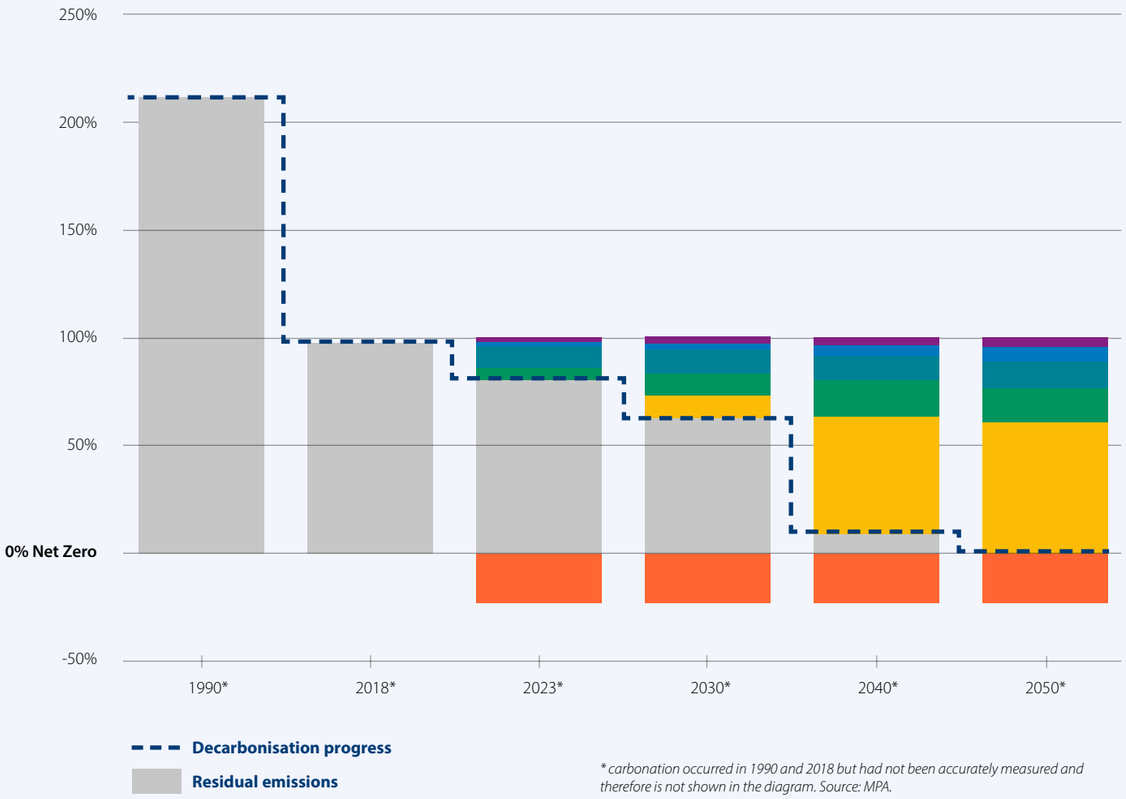
Source: MPA calculations.

Figure 3.5 Contribution of recycled and secondary aggregates [a] to total supply, 2023

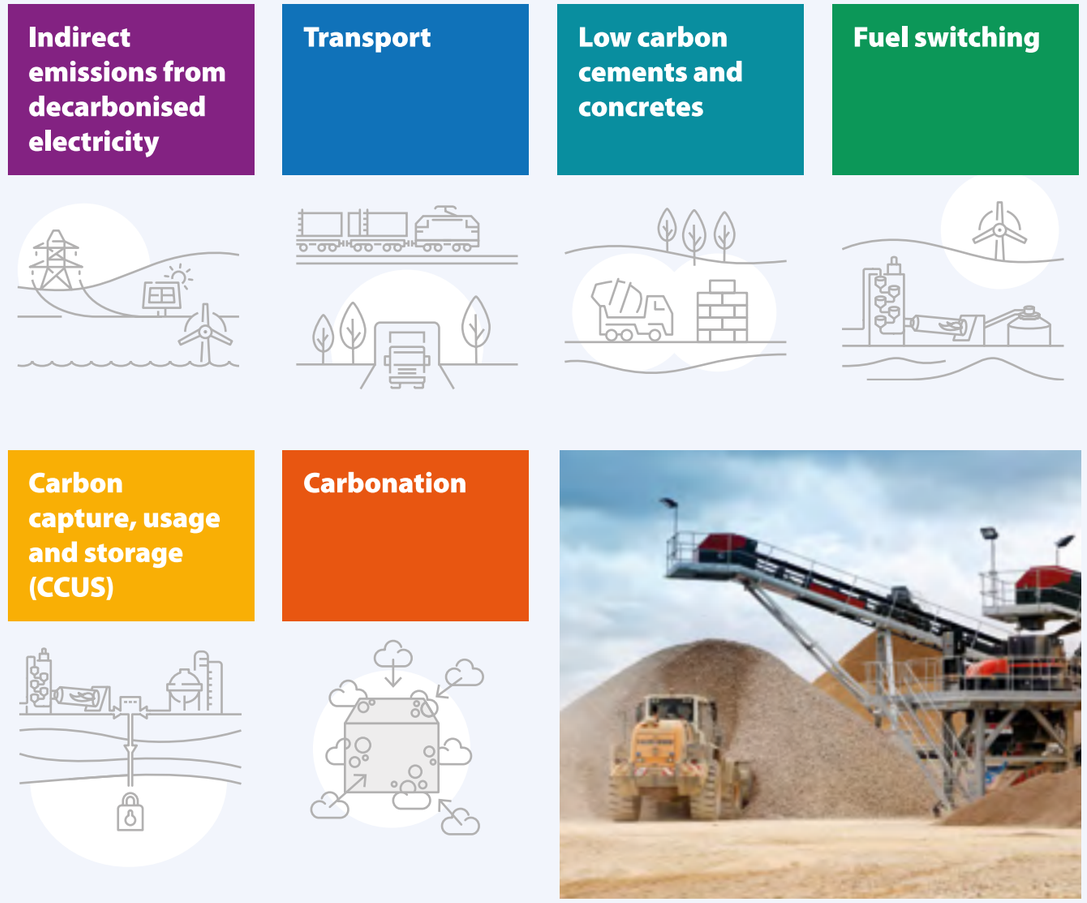


[a] *Includes manufactured, recycled (fixed and mobile) and aggregates re-used on site. Source: Aggregates Europe, MPA.*

Figure 3.6 Cement and concrete decarbonisation trajectory to 2050



** carbonation occurred in 1990 and 2018 but had not been accurately measured and therefore is not shown in the diagram. Source: MPA.*



C. Net Zero and climate adaptation

The cement and lime sectors are the most carbon-intensive parts of the Mineral Products Industry, due to both high-temperature processing and the release of process emissions from raw materials such as calcium carbonate.

Despite this, the industry has made significant progress. Between 1990 and 2023, total UK cement and concrete manufacturing emissions fell by 63%, outperforming the UK economy as a whole (Figure 3.6). This was achieved through substantial investment, including in alternative fuels, energy efficiency, and replacing a portion of clinker with by-products such as ground granulated blast furnace slag and fly ash. There is more detail provided in the UK Concrete and Cement Industry 'Roadmap to Beyond Net Zero' progress report, published in 2025 (MPA, 2020b; MPA, 2025).

A separate roadmap for the lime sector (MPA, 2023) outlines how net negative emissions could be achieved by 2040, building on a 25% reduction in carbon emissions since 2005.

Other mineral products are also making progress. For example, warm mix asphalt has scope to cut production emissions by up to 15% (AIA, 2019). Increasing the use of recycled asphalt also reduces embodied carbon, whilst better road construction and maintenance can reduce vehicle emissions and congestion delays. A European study estimated that upgrading one-third of the road network by 2030 could save 14 million tonnes of CO_2 annually (EAPA, EUPAVE, & FEHRL, 2016). The European Asphalt Pavement Association has also published a roadmap 'Towards Net Zero' (EAPA, 2025), indicating a strategy to build savings from already available and predicted near market technologies and methodologies.

The extraction, processing and transport of aggregates generates emissions, but at a significantly lower scale. Carbon intensity of on-site aggregate production is relatively low, averaging 2.9 kg CO_2/tonne for crushed rock, 3.2 kg CO_2/tonne for land-won sand & gravel and 7.1 kg CO_2/tonne for marine sand & gravel[1]. Together, these emissions made up just 0.2% of the UK's total territorial CO_2 emissions in 2023. These figures exclude transport emissions.

Site management and restoration also play an important role for climate adaptation:

- Restored sites offer carbon storage and biodiversity gains, especially through habitats like wetlands, woodland, heathland, and reedbeds (Natural England, 2021)
- Wetland restoration supports flood mitigation and water management
- Research shows that applying rock dust or waste cement to cropland may enhance carbon sequestration at scale (Beerling, 2020)

[1] marine aggregates data include CO2 associated with transport to the first point of delivery.

0.2% of UK CO_2 Emissions

On-site aggregates production generated just 0.2% of total UK CO_2 emissions in 2023

D. Biodiversity and nature restoration

The Mineral Products Industry is uniquely placed to support nature recovery goals, delivering biodiversity net gain and restoring priority habitats at scale.

For over 50 years, the industry has led the way with high-quality site restoration, transforming former quarries and other sites into thriving habitats for rare and threatened species. MPA members have already created at least 8,300 hectares of UK priority habitat – more than eight times the size of Richmond Park – with a further 11,000 hectares planned through future restoration schemes. Many of these restored sites are now designated as Sites of Special Scientific Interest, Local Nature Reserves, or National Nature Reserves.

The industry collectively manages over 247 square miles of land, an area larger than the New Forest. It plays a key role in supporting the re-creation and expansion of UK Priority Habitats. Restored mineral sites can deliver wetlands, heathlands, grasslands, and woodlands that benefit biodiversity, water management, and carbon storage.

MPA's National Nature Park showcases over 80 restored quarry sites across the UK, open to the public and of special interest to conservationists and communities. These sites offer trails, bird hides, and opportunities to learn about biodiversity, and together form a growing national network for nature.

Restoration to nature conservation is supported by the MPA Biodiversity Strategy (MPA, 2020a), which promotes best practice and partnership working with organisations such as Natural England, the RSPB, the Bumblebee Conservation Trust, and the Freshwater Habitats Trust. Industry efforts are recognised through the MPA Restoration and Biodiversity Awards, now in their sixth decade, celebrating outstanding achievements in nature conservation.

Importantly, the industry was delivering biodiversity net gain long before it became a legal requirement. With the Government's Biodiversity Net Gain regulations now in place, the mineral products sector continues to work with Defra and Natural England to ensure that the specific characteristics of minerals extraction, including temporary land use and progressive restoration, are properly reflected.

Further information is available on the MPA website:
www.mineralproducts.org/Campaigns/Quarries-and-Nature/MPAs-National-Nature-Park.aspx

"We have many good examples across the country of really beneficial outcomes for nature that have resulted from mineral extraction (…) With a little imagination and forethought, we can achieve a great deal for nature as well as extracting the resources we need for different kinds of developments."

Tony Juniper, Chair, Natural England

E. Governance and sustainability reporting

The Mineral Products Industry is committed to high standards of governance and the responsible management of natural resources. Transparency and accountability in financial, environmental, and social performance are core to the sector's approach, aligning with evolving regulatory and policy expectations as well as consumer demands.

Several financial and sustainability reporting frameworks are already in place or emerging, with major ones including:

- Environmental Impact Assessments (EIAs) for planning and permitting.
- Environmental Product Declarations (EPDs) to support low-carbon procurement.
- UK Extractive Industries Transparency Initiative (UK EITI), of which the MPA is a supporting member on behalf of the Mining & Quarrying industry.

In addition to these, broader ESG frameworks are increasingly influencing reporting requirements across the entire supply chain, not just for major operators. Regulatory bodies, investors, and clients are all driving demand for consistent, high-quality sustainability disclosures.

As a result, the industry is actively engaged in improving data quality, comparability, and reporting standards. These efforts support regulatory compliance, responsible sourcing, national and international sustainability goals, including Net Zero and biodiversity commitments. By enhancing data collection and transparency, the industry aims to strengthen trust and ensure that materials used in everyday products and construction are sourced in a manner that supports both community well-being and environmental sustainability.

4. Securing the long-term supply of aggregates

Aggregates are the backbone of construction and manufacturing. Without a secure, sustainable and affordable supply of these essential materials, the UK's ambitions for economic growth, decarbonisation, energy security, and housing delivery will not be met.

The UK is fortunate to have a wide geographical distribution of aggregates resources, allowing the industry to support highly productive, well paid, local employment, often in rural areas, while minimising transport distances and emissions. Imports remain low, highlighting the importance of maintaining a resilient domestic supply.

However, aggregates supply remains too often assumed, rather than strategically planned. The steady and adequate long-term supply cannot be guaranteed; it depends critically on the effectiveness of the mineral planning system and the timely provision of new planning permissions to replenish permitted reserves.

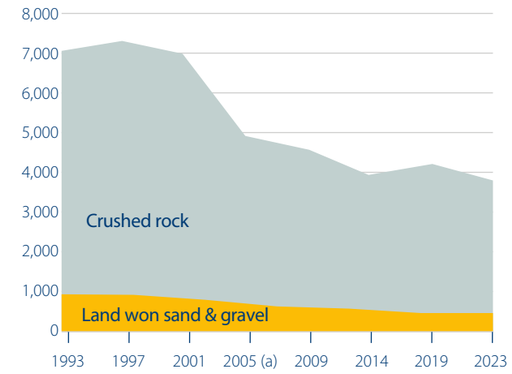
A major issue facing the industry relates to the significant number of mineral planning permissions currently due to expire in 2042. While some operations will have exhausted their reserves by then, particularly sand and gravel sites, many sites supporting major rock and industrial mineral operations are likely to still contain commercially viable reserves, and as such may still be producing essential minerals.

The importance of maintaining productive capacity up to and beyond 2042 is further compounded by the long-term decline in the permitted reserve base, with mineral reserves continuing to be sold and consumed at a faster rate than they are being replaced. As a result, total permitted reserves of land-won primary aggregates in England and Wales have declined significantly over the past 20 years, falling to just under 3.8 billion tonnes in 2023, a 23% drop since 2005 (Figure 4.1).

In Scotland, a further 1.3 billion tonnes of permitted land-won aggregates exist, primarily crushed rock. However, more than half (700 million tonnes) are concentrated in a single site: the Glensanda super-quarry on the west coast near Oban.

Marine-dredged sand & gravel supplements land-won supply, with 362 million tonnes of total permitted reserves. These resources are important but are not a substitute for regional land-based supply.

Figure 4.1 Permitted reserves of land-won aggregates in England and Wales (Million tonnes)



[a] *The step change reduction between 2001 and 2005 was influenced by a more robust and consistent reserve assessment methodology than previously used. Source: BGS.*

A key indicator of long-term supply is the replenishment rate, i.e., the ratio of new reserves granted permission relative to annual sales. Over the 10 years to 2023, the replenishment rate for land-won sand and gravel averaged just 61%, and for crushed rock only 33% (Figure 4.2). This means that for every 100 tonnes extracted, only 61 tonnes of sand and gravel and 33 tonnes of crushed rock were replaced. Reserves are being depleted more than twice as fast as they are being replenished.

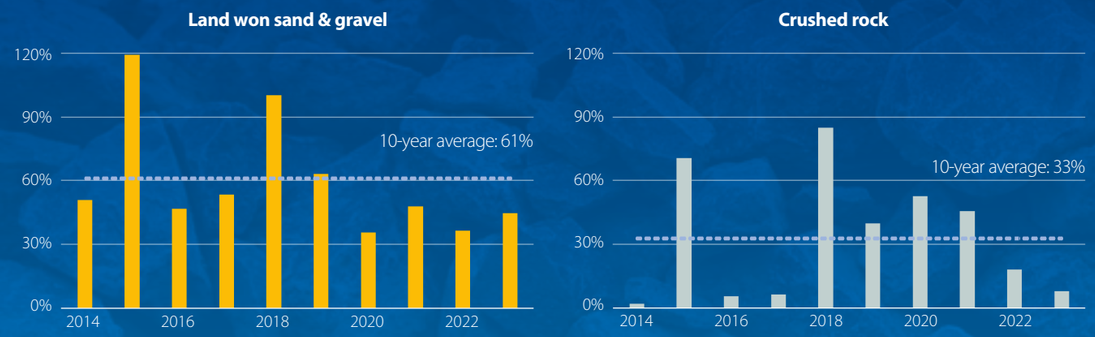
This is not sustainable. If this pattern continues, some regions may experience shortfalls in local supply, increasing dependence on imports from further afield, raising costs, and undermining efforts to reduce carbon emissions due to the additional transport distances required to maintain supply.

Recycled and secondary aggregates already make a substantial contribution to supply and will continue to do so, currently accounting for around 30% of total demand. Their potential to increase much further is limited by availability and technical constraints. Even under optimistic scenarios, primary aggregates will still need to meet around two-thirds of total demand to 2035 (MPA, 2022a).

UK Government policy ambitions, including to increase the availability of housing stock, building major transport and energy infrastructure, and transitioning to Net Zero, will require significant volumes of construction materials to be delivered. Under conservative assumptions, MPA projections suggest that annual aggregates demand could rise to over 320 million tonnes by 2035, adding further pressure to already strained reserves.

Aggregates resources may be comparatively low-cost and abundant, but they are not unlimited. Their supply must be strategically planned, monitored and managed if the UK is to deliver on its long-term economic and sustainability goals.

Figure 4.2 Replenishment rates[a] for sand & gravel and crushed rock in Great Britain



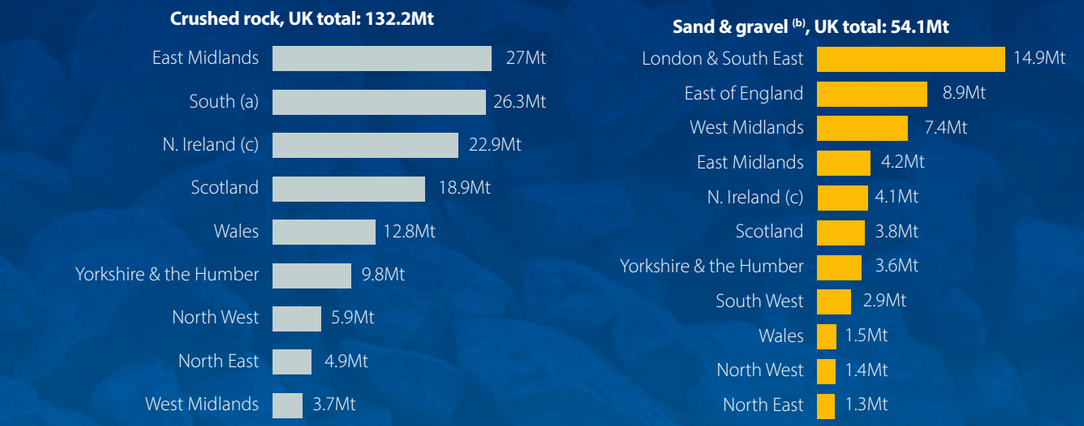
[a] If the tonnage of aggregates receiving planning permission equals the level of production, the replenishment rate would be 100%. Source: MPA.

5. Mineral products profiles

A. Construction aggregates

Primary aggregates, including quarried crushed rock, land-won and marine-dredged sand & gravel, are the backbone of UK construction. In 2024, 186.3 million tonnes of primary aggregates were produced across the UK, down from 190 million tonnes in 2023. In 2024, total supply included 132.2 million tonnes of crushed rock and 54.1 million tonnes of sand & gravel. The East Midlands and the South West were the largest shares of crushed rock production, whilst London and the South East accounted for nearly 28% (15.3 million tonnes) of sand & gravel supplies (Figure 5.1).

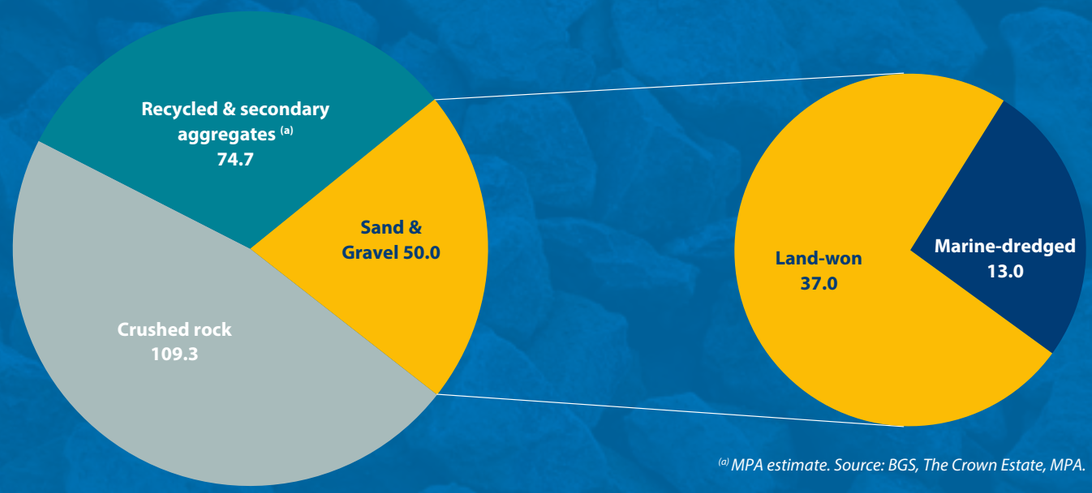
Figure 5.1 UK primary aggregates production, 2024 (Million tonnes)



[a] Includes the East of England, London, South East and South West. [b] Includes land-won and marine-dredged sand & gravel. [c] Due to underreporting in the Department for the Economy Annual Minerals Statements, totals for N. Ireland are estimated by MPA using data from its members. Source: BGS, The Crown Estate, MPA.

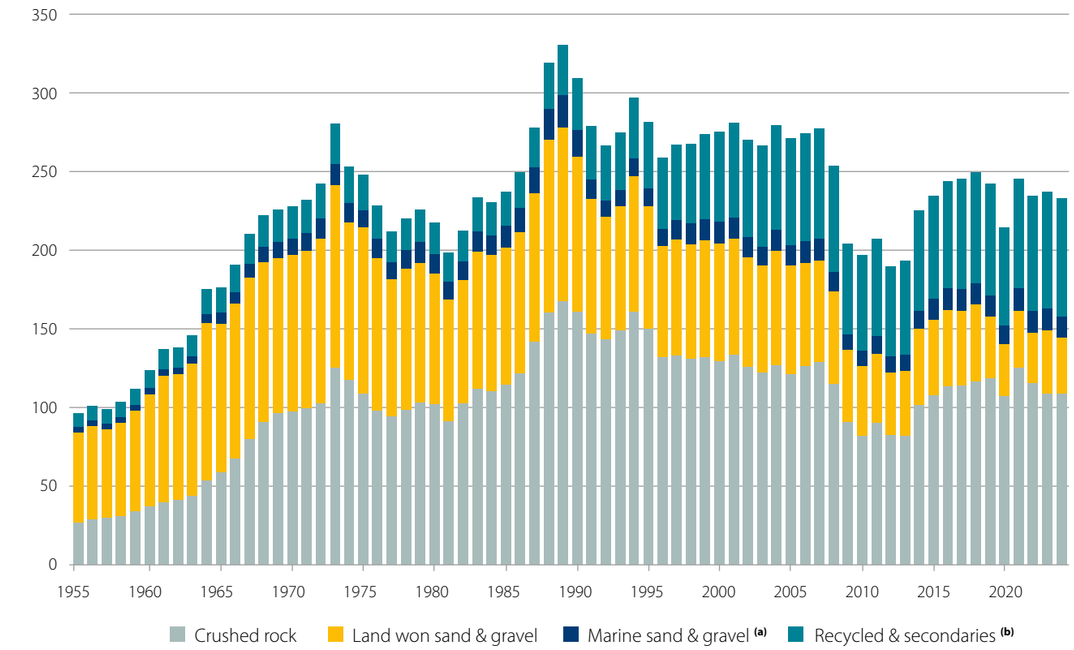
Marine sources supplied 26% (13 million tonnes) of total sand & gravel used in Great Britain in 2024 (Figure 5.2 and Figure 5.3). This is an increase from 16% in 2005. In addition to domestic construction, marine aggregates also support beach nourishment, and a small share are exported overseas, mainly to the Netherlands and Belgium, for use in construction (The Crown Estate, multiple years). Total marine extraction remains below the overall tonnage permitted by Crown Estate licences (Figure 5.4). Different licences help ensure that individual dredging areas can offer a variety of materials, from fine sand to coarse gravel, whilst providing the scale and geographical flexibility to respond to future changes in market demand.

Figure 5.2 Supply of construction aggregates by source in Great Britain, 2024 (Million tonnes)



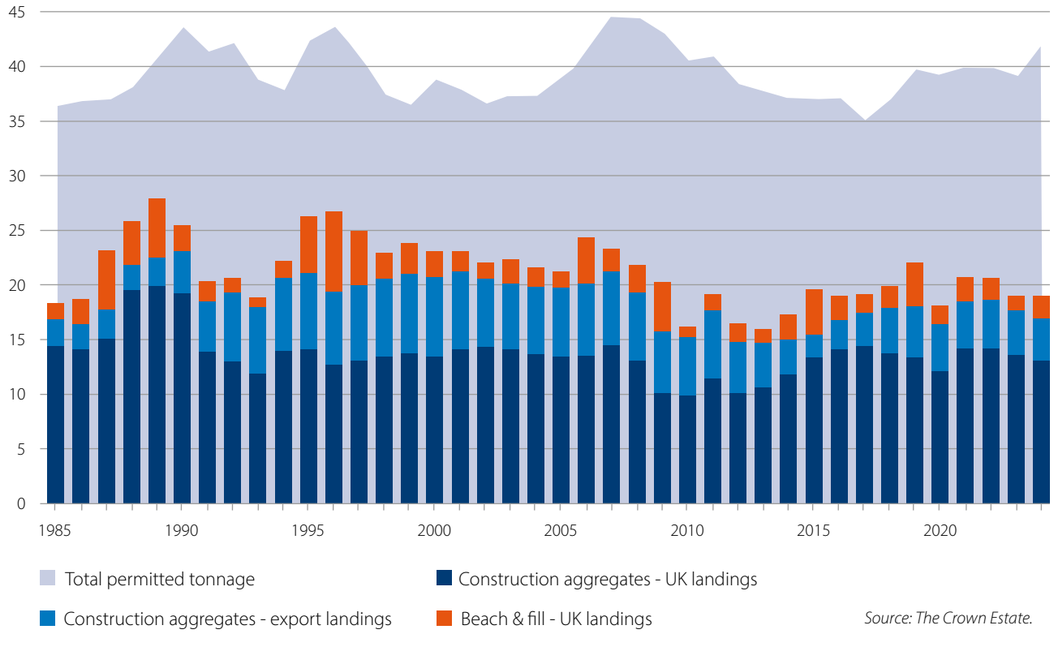
[a] MPA estimate. Source: BGS, The Crown Estate, MPA.

Figure 5.3 Supply of construction aggregates by source in Great Britain (Million tonnes)



[a] *Landings for construction only. Excludes exports and beach replenishment.* [b] *2023 and 2024 are provisional estimates based on construction trends.*
Source: BGS, The Crown Estate, MPA.

Figure 5.4 Marine-dredged sand & gravel supply in the UK (Million tonnes)



Source: The Crown Estate.

In addition to primary sources of aggregates, MPA estimates that a total of 74.7 million tonnes of recycled and secondary aggregates were used in 2024, accounting for just under a third of the total supply of construction aggregates in Great Britain (Figure 5.2 and Figure 5.3).

These materials are sourced from construction and demolition waste, and as by-products from other industrial activities. Their contribution has grown significantly since the 1990s; the UK has among the highest recycling rates across Europe. However, their future potential is constrained by supply availability, which is primarily linked to demolition activity, and technical requirements.

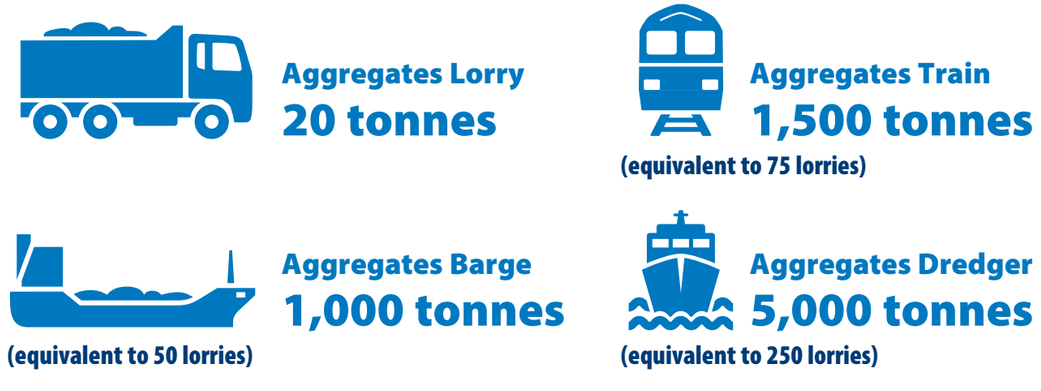
Recent years have brought volatility to the aggregates markets. Following a sharp pandemic downturn in 2020, demand rebounded strongly in 2021, before softening again since 2022, amid wider UK economic uncertainty, which has impacted investment in construction. Housebuilding was particularly affected, as UK interest rates rose to a 15-year high in mid-2023, before starting to fall back. Yet despite the near-term weakness, long-term aggregates demand is projected to grow, driven by major infrastructure programmes, the energy transition and housing delivery (MPA, 2022a).

Aggregates can only be worked where geologically available, meaning supply is not evenly distributed across the UK. This requires substantial inter-regional flows (BGS, multiple years, a). Movements are particularly significant for crushed rock to address geological scarcity in regions with high demand such as London and the South East, with materials imported by rail from the East Midlands and South West. Similarly, significant volumes of marine-dredged sand & gravel are landed at Thames and south coast wharves to supply these markets.

Transport infrastructure is therefore crucial to access construction markets. Aggregates are a high-bulk, low-cost commodity and are highly sensitive to transport distances. Efficient use of rail depots and wharf facilities enables the industry to move large volumes economically, often delivering 2,000–10,000 tonnes per shipment to urban areas near the point of use. For example, in London and the South East, 31% of all primary aggregates consumed in 2023 were from marine sources landed at local wharves (BGS, multiple years, a).

Safeguarding access to key transport infrastructure, such as railheads and wharves, is essential to ensure continued supply. National planning policy recognises this, and these facilities must be protected to maintain a sustainable aggregates supply chain.

Figure 5.5 Transporting construction aggregates



B. Cementitious

Cementitious materials include cement, ground granulated blast-furnace slag (GGBS) and coal-derived fly ash. Together, they are essential components in the production of ready-mixed concrete, precast concrete, and mortar.

In 2024, total UK sales of cementitious materials were 12.8 million tonnes (Figure 5.6) due to a decline in construction activity. After sharp declines in 2020, when cement sales fell 13% and demand for ready-mixed concrete and mortar dropped 16.8% and 18.5%, respectively, a strong rebound occurred in 2021. However, momentum stalled, and construction demand declined again from 2022 onwards, as the UK economy suffered from lingering global supply chain disruptions from the pandemic and the war in Ukraine. Rising inflation, higher interest rates, and falling real wages triggered the sharpest fall in living standards in decades, dampening economic activity and construction investment. Simultaneously, surging energy and raw material costs placed severe pressure on cement producers, amplifying the sector's challenges.

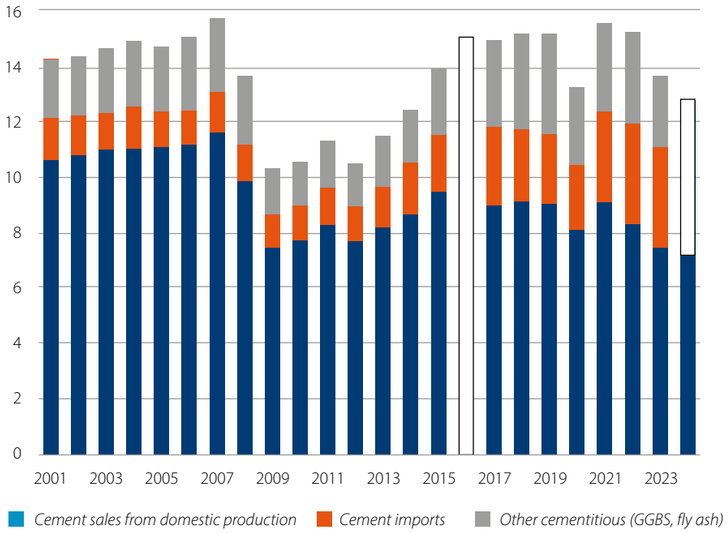
1. Cement

Cement is manufactured by heating a mix of limestone or chalk, with smaller quantities of clay or shale, to around 1450°C. This process removes carbon dioxide from calcium carbonate to form clinker, which is then ground with 4–5% gypsum to produce Portland cement (CEM I). Blended cements are produced by substituting a portion of the clinker with Supplementary Cementitious Materials (SCMs), GGBS, fly ash, or limestone fines, reducing the carbon intensity of the final product. In the UK the majority of SCMs are added at the concrete works to produce cement equivalent combinations.

In 2024, cement sales from UK production fell to their lowest level since 1950, reaching just 7.1 million tonnes (Figure 5.6). Cement imports trebled in the past 15 years, rising from 1.2 million tonnes in 2010 to 3.6 million tonnes in 2023. Imports accounted for an unprecedented 32% of total domestic sales, driven largely by high UK production costs - from electricity and labour to broader regulatory and compliance burdens.

In terms of end-use, 58% of UK domestic cement sales in 2024 went into ready-mixed concrete, with a further 24% used in precast concrete and mortar production (Figure 5.7).

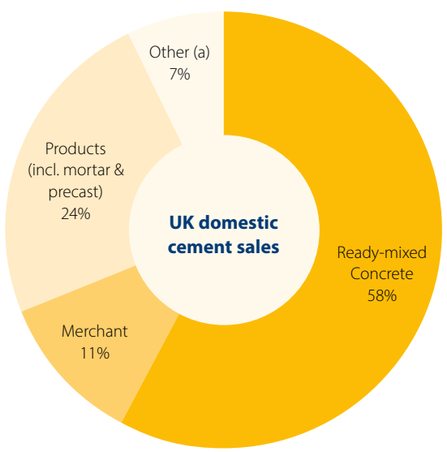
Figure 5.6 Total UK cementitious sales [a,b] (Million tonnes)



[a] GB to 2014, UK from 2015. [b] The full breakdown of total cementitious sales in 2016 and 2024 is not available for confidentiality reasons.

Source: MPA.

Figure 5.7 UK domestic cement sales by channel in 2024



[a] Includes cement that goes into soil stabilisation, special grout formulation, diaphragm wall grouts & other applications that do not fall into either RMC products or merchant sales.

Source: MPA.

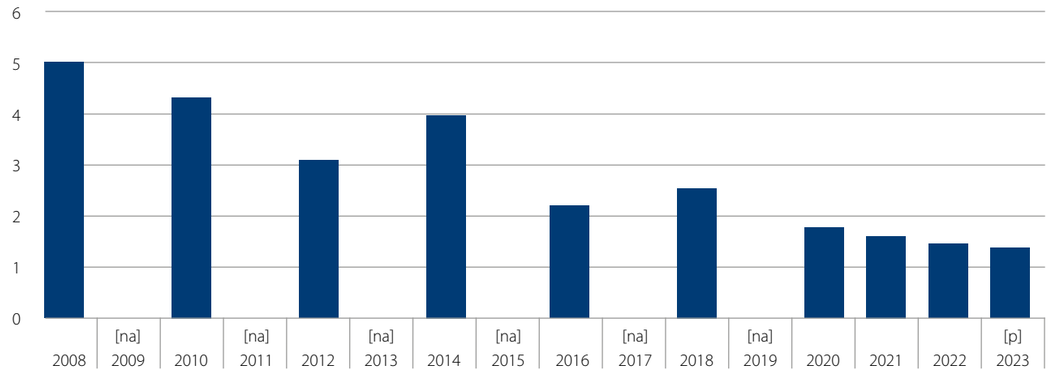
2. Slag

Slag is a by-product of iron and steel production, processed into construction aggregates and cementitious materials.

It can be used in many applications ranging from aggregates for construction products, to water treatment, soil conditioners and cementitious materials. Its use in cement dates back over 100 years, with GGBS replacing between 20% and 80% of Portland cement in concrete. Air-cooled blast furnace and steel slags also serve as durable construction aggregates, particularly in high-specification road surfacing, water treatment, and soil remediation.

UK slag production has declined steadily, falling from 5 million tonnes in 2008 to just under 1.4 million tonnes in 2023 (Figure 5.8) due to a reduction in domestic steel manufacturing. Only one steelworks remains in the UK, so supply is increasingly reliant on imports from Europe, China, Japan and India.

Figure 5.8 UK production of blast furnace and steel slags (Million tonnes)



(na) Not available. (p) Provisional. Source: Euroslag, MPA.

3. Coal derived fly ash

Fly ash is a fine, pozzolanic residue from coal-fired power stations. It has long been used in cement and concrete, and as a secondary aggregate for use in concrete products, grouting, waste stabilisation, and engineered fill.

Before the Large Combustion Plant Directive (2008), the UK produced over 7 million tonnes of fly ash annually. However, with coal-fired power generation now phased out in the UK, domestic fly ash production fell substantially. Domestic supply has been supplemented by imports and by recovering material from stockpiles. The UK Quality Ash Association estimates that up to 100 million tonnes of fly ash remain in UK lagoons and landfills, representing a significant potential secondary resource for use in cement and as aggregates.

C. Ready-mixed concrete

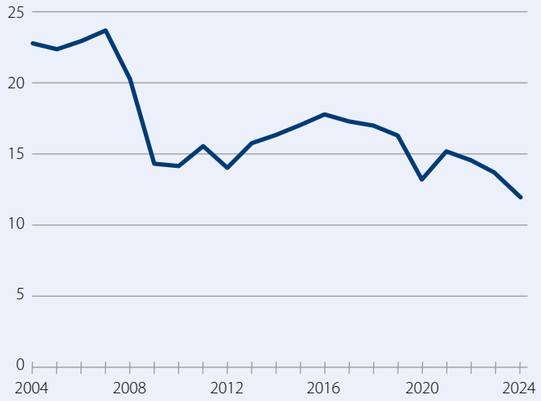
Concrete is essential to modern life. From homes, schools and hospitals to transport, energy and water infrastructure, it underpins the built environment. Its strength, durability, fire resistance and energy efficiency make it uniquely suited to deliver long-lasting, resilient structures across all sectors of construction.

Ready-mixed concrete is produced close to the point of use – typically within just 8 miles – supporting local jobs and communities. It is a core product within a well-established domestic supply chain, ensuring the secure, sustainable supply of materials across the UK.

Demand for ready-mixed concrete closely follows construction activity and wider economic conditions. While official data is limited, MPA industry survey data show that sales volumes in Great Britain have been on a gradual decline since 2016 (Figure 5.9). This trend initially reflected a slowdown in commercial construction, particularly new office and retail developments, driven by subdued investment, the shift in retail habits from in store to online, and new post-pandemic working models. Since 2022, the downturn has been compounded by a sharp fall in housebuilding, linked to the cost-of-living crisis, high inflation and wider economic uncertainty. As a result, demand for ready-mixed concrete declined by 31% between its most recent peak in 2016 and 2024.

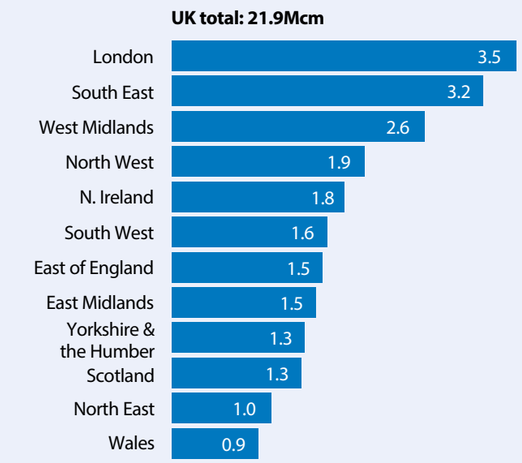
Based on producer surveys, MPA estimates that a total of 21.9 million cubic metres of ready-mixed concrete were produced in the UK in 2024 (Figure 5.10). London and the South East remain the largest regional markets, together accounting for 30% of total UK supply. London alone consumes up to four times more ready-mixed concrete than other parts of the UK, reflecting the capital's scale and concentration of construction activity.

Figure 5.9 MPA Industry Survey[a]: Ready-mixed concrete sales in Great Britain (Million cubic metres)



[a] *The MPA industry survey is estimated to represent over 60% of total ready-mixed concrete sales in Great Britain in recent years. Source: MPA.*

Figure 5.10 Estimated UK ready-mixed concrete production in 2024[a] (Million cubic metres)



[a] *Regional totals do not add up to the UK total due to rounding. Source: MPA.*

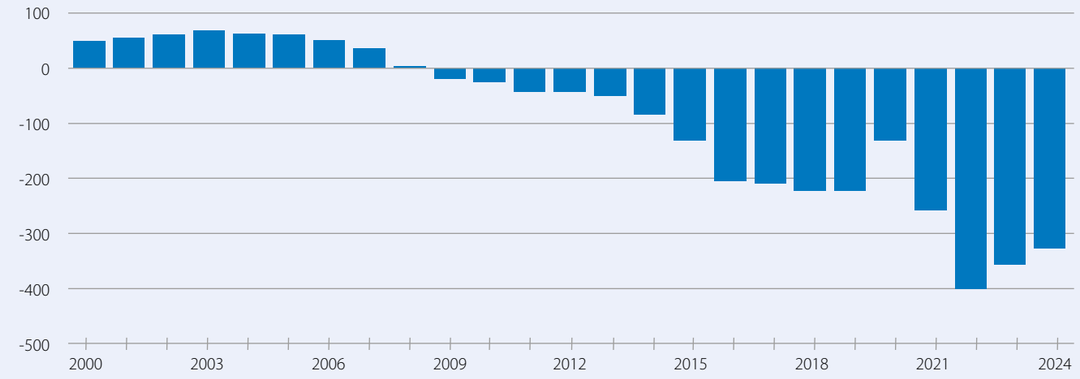
D. Precast concrete and masonry

Precast concrete covers a wide range of factory-made products, from small masonry blocks to large bridge beams. These elements are integral to modern construction, providing strength, durability, and design flexibility.

In housing, precast products are particularly prominent: around 80% of new roofs use concrete tiles, while concrete and masonry have delivered structural strength, thermal mass, and fire protection to over 70% of new homes built in the past three decades (NHBC, 2025).

The UK market is predominantly supplied by domestic producers, but it is increasingly exposed to international competition. Over the past two decades, the UK has shifted from a trade surplus to a significant trade deficit in concrete products, becoming a net importer in 2009 (Figure 5.11). This reflects both strong domestic demand and the competitive pressures of global supply chains.

Figure 5.11 UK trade of concrete products (£ million)[a]



[a] *Include commodity codes 681011, 681019, 681091, 681099. Source: HMRC.*

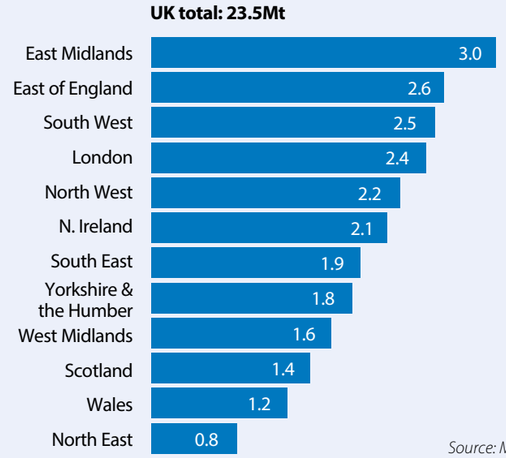
E. Asphalt

Roads are the economic and social arteries of the UK, ensuring door-to-door connectivity for goods, services, and people. Asphalt is central to both road construction and maintenance, forming the backbone of integrated transport networks. Its importance was underscored during the Covid-19 pandemic, when roadworkers and their supply chains were recognised as 'key workers'.

Asphalt is 100% reusable into new asphalt or recyclable into other construction products and can incorporate other recycled materials. It delivers cost-effective, safe, and quiet road surfaces, while ongoing innovation is enhancing durability, reducing carbon emissions, and meeting rising performance expectations from road owners and users.

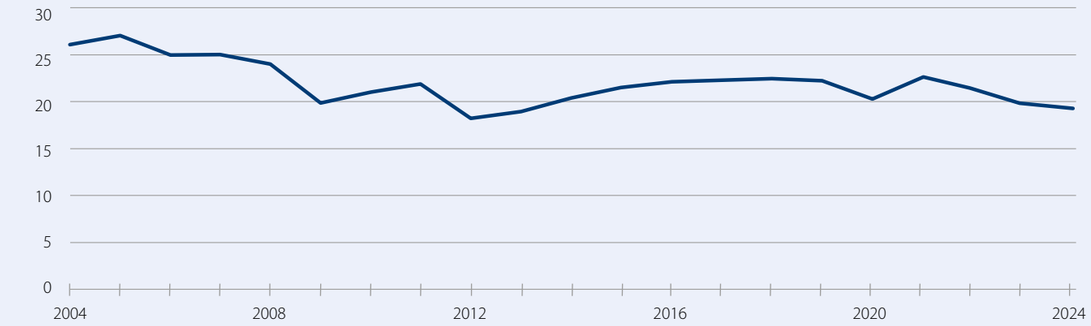
Based on industry surveys, the MPA estimates that 23.5 million tonnes of asphalt were produced in the UK in 2024 (Figure 5.12). Production rebounded sharply in 2021 following the initial pandemic disruption, but volumes fell 15% between 2022 and 2024 (Figure 5.13). This decline was driven by a slowdown in major road schemes and local authority repair and maintenance programmes constrained by Government funding levels, alongside a wider construction downturn, particularly in new housing.

Figure 5.12 Estimated UK asphalt production in 2024 (Million tonnes)



Source: MPA.

Figure 5.13 MPA Industry Surveys [a]: Asphalt sales in Great Britain (Million tonnes)



[a] *The MPA survey is estimated to represent 90% of total asphalt sales in Great Britain. Source: MPA.*

F. Mortar

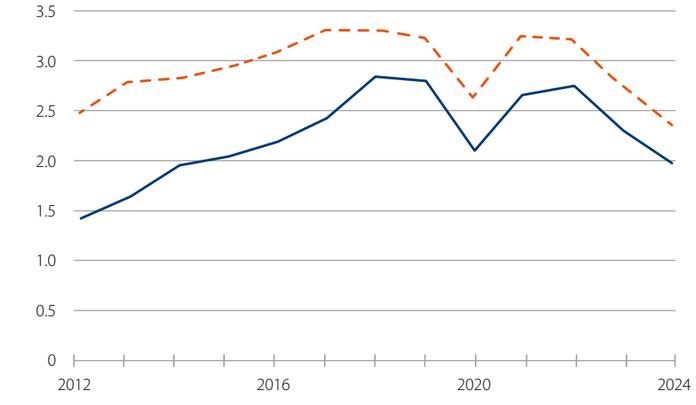
Mortar is essential to the construction of buildings, bonding bricks, blocks, and stones into durable masonry.

Continuous innovation in factory-produced mortar has enhanced performance and sustainability, including the development of cement-free formulations and products for emerging techniques such as 3D printing.

Demand tracks housebuilding closely. Based on producer surveys, MPA estimates production at around 2.4 million tonnes in Great Britain in 2024, down 26% from 3.2 million tonnes in 2022, mirroring the sharp fall in housebuilding activity, particularly housing starts, amid high interest rates, elevated input costs, and weak UK growth (Figure 5.14). A further 360,000 tonnes was estimated in Northern Ireland in 2024.

In 2025, the near-term outlook remains subdued, although easing mortgage rates, improved affordability, and planning reforms to support the delivery of Government housebuilding commitments should lift mortar demand.

Figure 5.14 Mortar sales in Great Britain (Million tonnes)



Source: DBT, MPA.

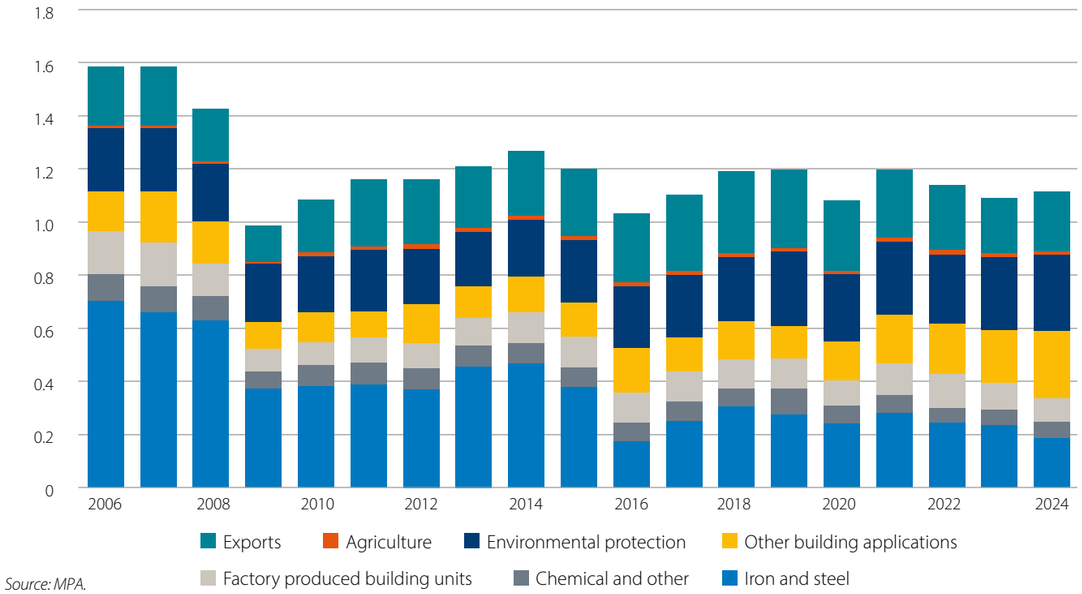
G. Industrial lime

Industrial lime is a critical input for a wide range of UK industries, from steel, chemicals, glass, and paper to construction, food production, and environmental management. It is used in processes such as sugar refining, paints, leather and non-ferrous metals, and also scrubbing pollutants from incinerators and kilns, in drinking water purification and sewage sludge treatment, as well as in neutralising acidic industrial effluents.

In construction, lime delivers environmental benefits in the production of insulating building blocks used in housing, when used in soil stabilisation to enable the use of onsite resources, and in asphalt modification, where it may help extend road life and reduce both the carbon footprint and maintenance needs. A variant of lime known as dolime (dolomitic lime) is essential for refractory applications, extending the service life of furnaces, kilns, and incinerators.

The UK industry is at the forefront of decarbonisation. In 2022, the sector conducted the world's first hydrogen-fuelled industrial lime production trials, replacing natural gas and cutting combustion emissions. The industry contributes to the UK's trade balance, with around 20% of domestic sales exported in 2024 (Figure 5.15), reflecting the high purity and specialist qualities of UK lime products.

Figure 5.15 UK industrial lime sales by end-usage (Million tonnes)



Source: MPA.

H. Agricultural lime

Agricultural lime remains a cornerstone of UK farming, providing the most effective means of correcting soil acidity while supplying essential calcium and calcium-magnesium nutrients.

By improving soil structure and nutrient availability, lime supports healthy, sustainable, and productive farmland essential for meeting future food security challenges. It also helps mitigate climate change impacts by enhancing soil resilience.

National survey data shows that UK soil pH levels are falling, with acidity increasing at a rate that threatens crop yields. Industry experts estimate that twice the current application rate of agricultural lime is needed to reverse this trend and restore optimal soil health (AHDB, 2023).

No official production statistics have been collected since the Office for National Statistics ceased the Annual Raised Mineral Inquiry in 2015. The last available data reported 1.6 million tonnes of agricultural lime sold in 2014 (ONS, 2016). Industry experts estimate current use at around 2.5 million tonnes per annum (AHDB, 2023).

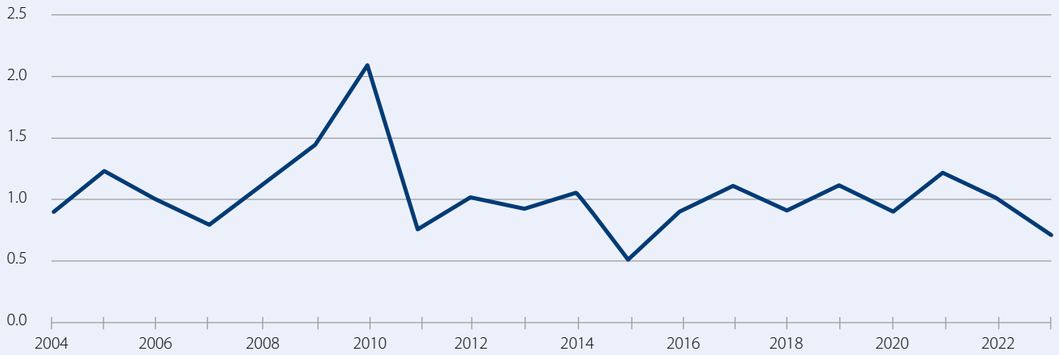
I. Dimension stone

The UK dimension stone industry plays an important role in preserving the distinctive local character of stone-built areas. These communities need to grow and evolve, which creates a need for extensions and new buildings, which in turn requires local dimension stone.

The industry also supplies heritage conservation and prestige construction projects both domestically and internationally. Demand is therefore a mix of new build, traditional repair and restoration work of heritage assets and high-end new developments.

UK production of building and dimension stone was 0.7 million tonnes in 2023, below the historical annual average of 1 million tonnes (Figure 5.16). By maintaining local supply and specialist skills, the UK industry underpins the local character of new build projects and heritage-led regeneration schemes, provides local employment and ensures continuity of materials that match the country's historic built environment. The UK is a net importer of dimension stone and low-cost imports represent a major threat to the UK industry (BGS, 2024).

Figure 5.16 UK Production of building and dimension stone (Million tonnes)



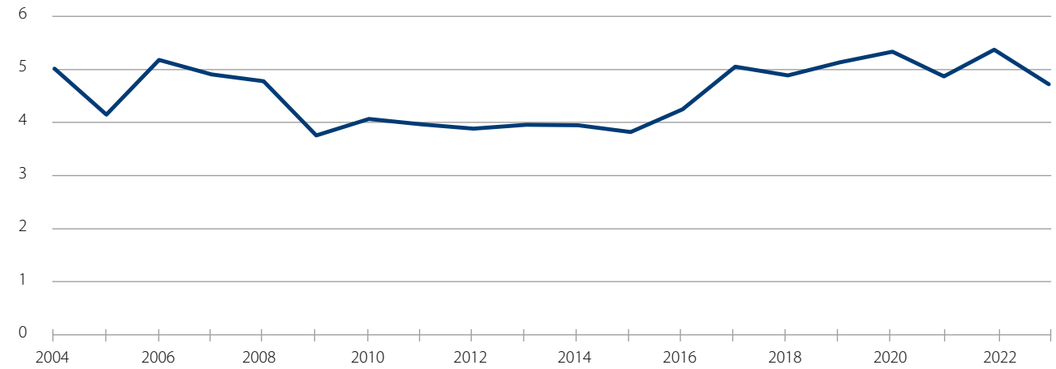
J. Industrial sand

High-purity industrial (silica) sand is a key raw material for glass manufacture, paints, plastics, and foundry moulds, as well as a wide range of other essential industrial uses.

Modern applications extend beyond heavy industry to include food production, water purification, rail braking systems, horticulture, and sports and leisure surfaces.

Following a sharp decline between 2006 and 2009, linked to structural changes in UK manufacturing, industrial sand production in Great Britain stabilised at around 4 million tonnes per year until 2015. Since then, the average annual output has increased to just under 5 million tonnes (Figure 5.17). This increase likely reflects the development of new, high-value applications, notably in the green economy, offsetting the long-term decline in traditional heavy industrial demand.

Figure 5.17 UK production of industrial sand (Million tonnes)



Source: BGS.

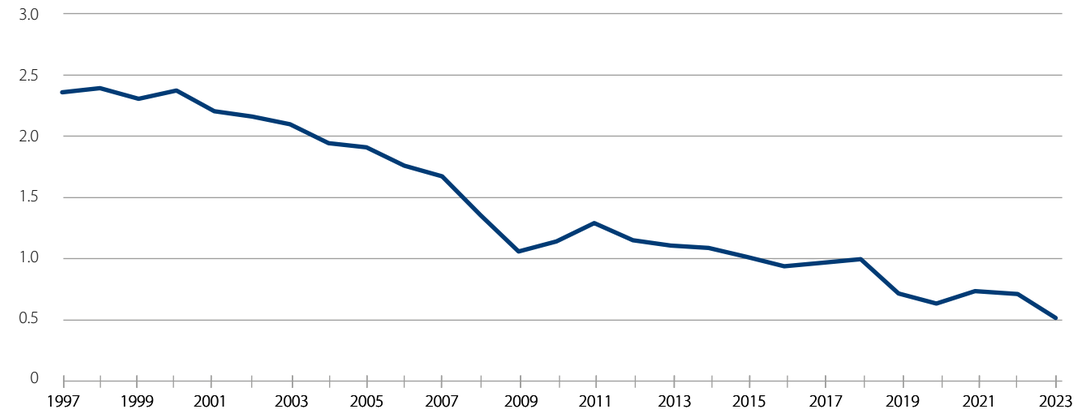
K. China clay

China clay (kaolin) has a wide range of industrial uses, from ceramics and paper to specialist applications such as pharmaceutical fillers, paints, adhesives and animal feeds. Its key properties are whiteness and the size and shape of grains, which influence strength, plasticity and fluidity, all of which are critical to meeting diverse customer specifications.

Production is concentrated in the South West of England, where china clay extraction also generates significant by-products. Each tonne of china clay typically produces up to nine tonnes of waste material, much of which can be processed into secondary aggregates for construction.

UK output has declined steadily over the past 25 years, reflecting shifts in global markets and rising import competition, as domestic producers have been challenged by high UK energy costs (BGS, 2009). In 2023, production fell to just over 500,000 tonnes (Figure 5.18).

Figure 5.18 UK production of china clay (Million tonnes)



Source: BGS.

L. Ball clay

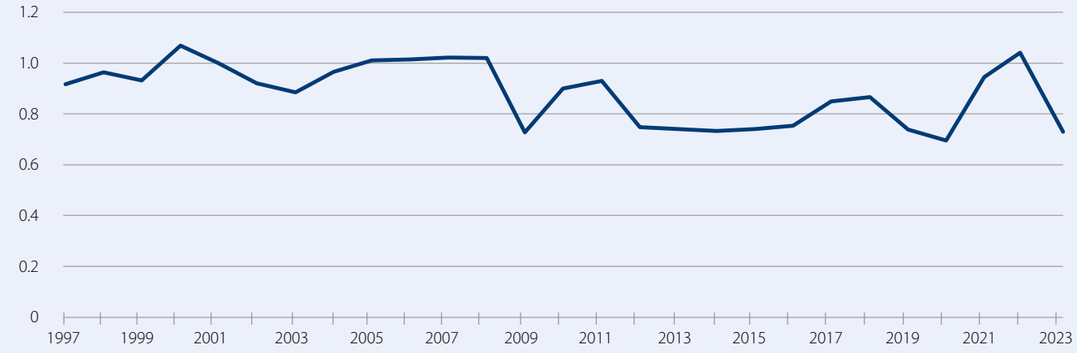
Also known as plastic clays, ball clays are mainly used in the ceramics industry for their moulding and firing properties, as well as the inherent strength they provide to finished products.

They are typically blended from different clay horizons and sources to achieve specific performance characteristics (BGS, 2011).

UK ball clays are a sought-after global commodity used in the manufacture of sanitaryware, tiles, and tableware, from sinks and toilets to wall and floor coverings.

Production is concentrated in Devon and Dorset, with annual output averaging around 800,000 tonnes over the past decade (Figure 5.19). Alongside supplying the domestic market, the UK exports significant volumes to customers in Europe, the Middle East, the Far East, and the Americas.

Figure 5.19 UK production of ball clay (Million tonnes)



Source: BGS.

6. About the Mineral Products Association (MPA)

Who we are

MPA is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and industrial sand industries.

MPA is the sectoral voice for mineral products, covering 100% of UK cement and lime production, 90% of GB aggregates production, 95% of asphalt and over 60% of ready-mixed concrete and precast concrete production.

Five key aims underpin the work of the MPA, creating the high-level agenda it uses to influence Government and other key stakeholders. We seek:

1. Economic conditions that support investments
2. Better Government support for an essential industry
3. A reasonable licence to operate
4. Proportionate legislation and regulation
5. Recognition of progress

What we do

MPA represents the interests of its members and the wider industry with all levels of Government, regulators and a wide range of other stakeholders. Key activities include:

- Improving health & safety
- Representing the sector
- Raising awareness of the sector and its contribution to the economy
- Gathering and presenting evidence and information
- Influencing policy, regulation and legislation in the UK and EU
- Protecting the industry's licence to operate
- Safeguarding and developing markets
- Improving perceptions
- Informing on markets and economic contribution
- Influencing technical and design standards
- Influencing supply chains
- Encouraging innovation
- Promoting the use of mineral products
- Educating stakeholders to 'Make the Link' between mineral products and their use

Mineral products in construction

QUARRYING, MINING & PRODUCTION

2,200 UK sites

- Aggregates
- Asphalt
- Cement
- Dimension Stone
- Concrete
- Industrial Sand
- Mortar
- Industrial Clay & Lime

QUARRY RESTORATION

- Biodiversity Net Gain
- Nature Reserves
- Country Parks
- Agriculture

RECOVERY, REUSE & RECYCLING

- Construction waste
- Excavation waste
- Commercial waste
- Industrial by-products

89,000 jobs

397 million tonnes produced in the UK

£6.7 billion direct GVA contribution to the UK economy

Homes
Business & Commerce
Power, Water & Communication Systems
Sea & Flood Defences
Schools & Hospitals
Factories & Depots
Roads, Railways & Bridges
Ports & Airports

Mineral products in manufacturing

Steel
Glass
Water
Food
Fertiliser
Medicine
Ceramics
Paper

Key metrics for 2023.

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PROFILE OF THE UK MINERAL PRODUCTS INDUSTRY, 2025 EDITION

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sustainable solutions

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