

MINERALS PLANNING ***[selected]* CURRENT ISSUES**

AN INDUSTRY PERSPECTIVE

David Payne
MPA

Overview

- Context - importance of the minerals sector
- Managed Aggregates Supply System
- Performance of planning system
- Safeguarding of resources and infrastructure
- Biodiversity & Environmental Net Gain
- UK Mineral Strategy and Making the Link



210mt

UK mineral extraction

£15bn

Turnover of mineral extraction

£68bn

Turnover of mineral products manufacture

£5bn

Gross value added of mineral extraction

£22bn

Gross value added of mineral products manufacture

£209bn

Gross value added of "first use" markets

£235bn

Total gross value added generated by minerals, including mineral extraction, products manufacture and "first use" markets

16%

Share of the UK total economy directly attributable to minerals

34,000

People employed directly in mineral extraction

4.3m

Jobs supported through the supply chain

Table 1: Minerals production in the UK (2013)

(Source: BGS)

	Million tonnes
Non-energy	196.9
Construction minerals	172.2
Including	
Igneous rock (inc granite)	40.5
Limestone, dolomite & chalk (construction uses)	53.6
Sandstone	11.5
Sand & gravel - Land-won	43.4
Sand & gravel - Marine	14.6
Slate	0.9
Gypsum	1.2
Fireclay	0.1
Clay & shale	6.5
Industrial minerals	24.6
Including	
Limestone, dolomite & chalk (industrial & agricultural uses)	16.3
Silica (industrial) sand	4.0
China clay (kaolin)	1.1
Salt	6.6
Potassium compounds (potash)	0.9
Ball clay	0.7
Peat	1.0
Other industrial minerals ¹⁾	0.1
Metals	<0.001
Including	
Iron ore	0.0
Tungsten	0.0
Tin	0.0
Gold	<0.001
Silver	<0.001
Zinc	0.0
Copper	0.0
Lead	<0.001
Energy	90.0
Including	
Oil ²⁾	40.6
Gas	36.5
Coal	12.8
Total	286.9

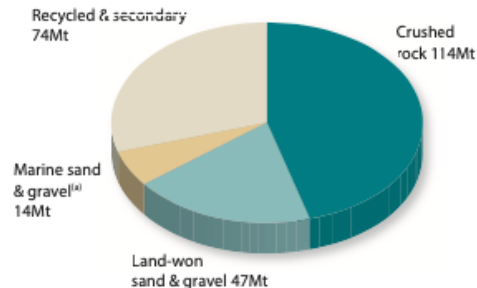
¹⁾ Includes Fuller's earth (bentonite), barytes, fluor spar, talc, calc spar, chert & flint, china stone (feldspar), phosphorus.

²⁾ Includes crude oil onshore and offshore, and condensates.



3.1b: Aggregates supply mix in GB, 2017.

Source: The Crown Estate, BGS (AM surveys), MPA.



3.1d: UK primary aggregates sales, 2017. Source: ONS

(AMRI), BGS (AM surveys), QPANI, MPA.

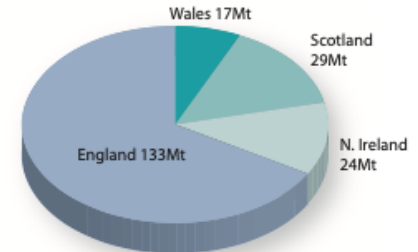
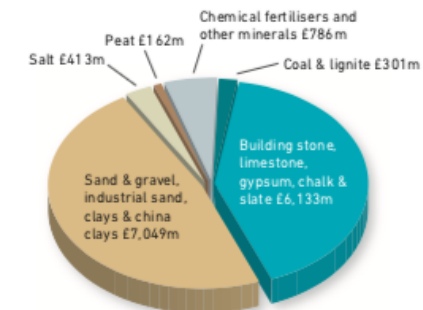
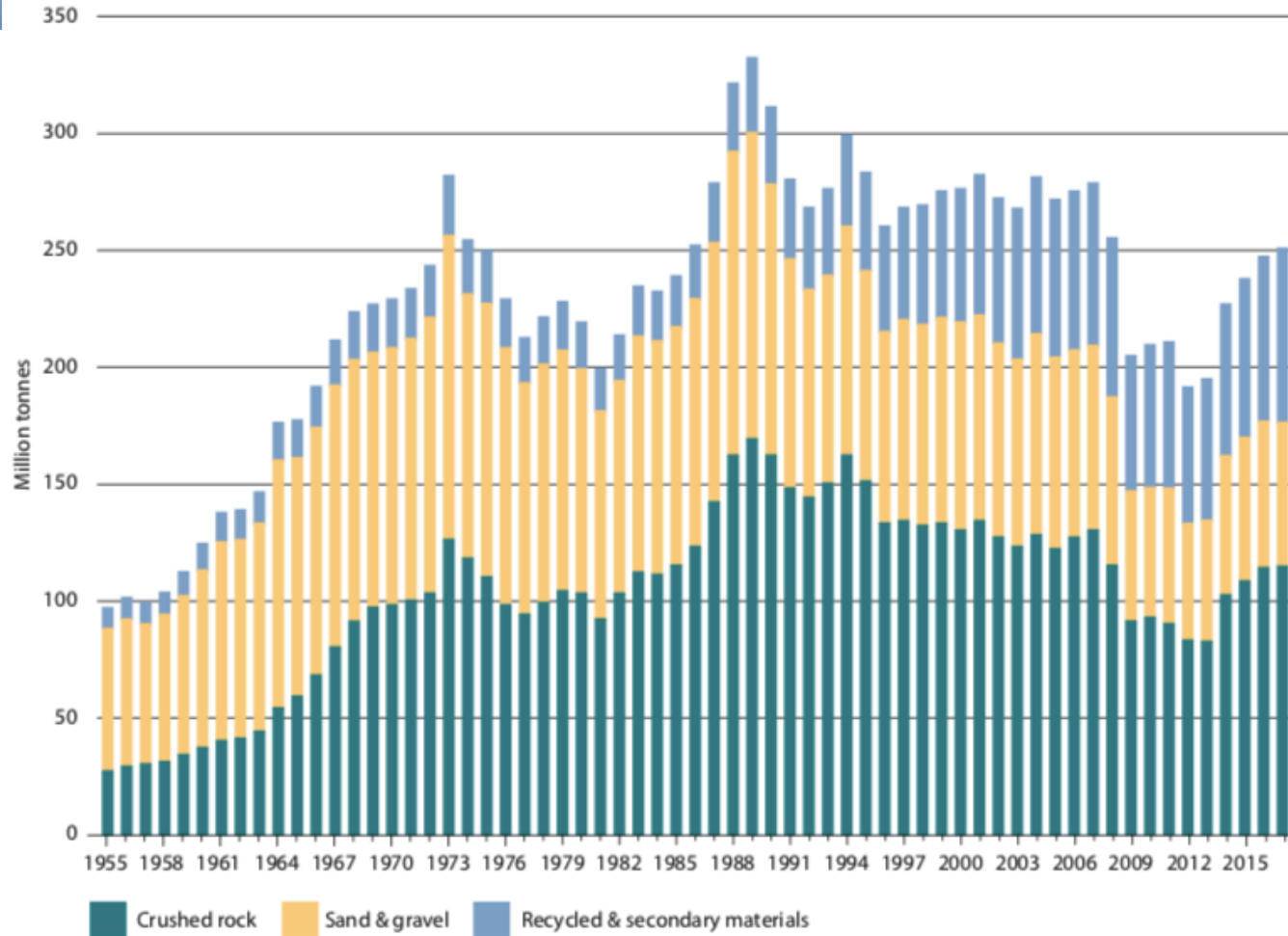


Chart 1: Estimated turnover of UK non-energy minerals and coal (2013) (Source: ONS, ABS, MPA)



3.1a: GB aggregates market by sources of supply. Source: ONS (AMRI), BGS (AM surveys), MPA.



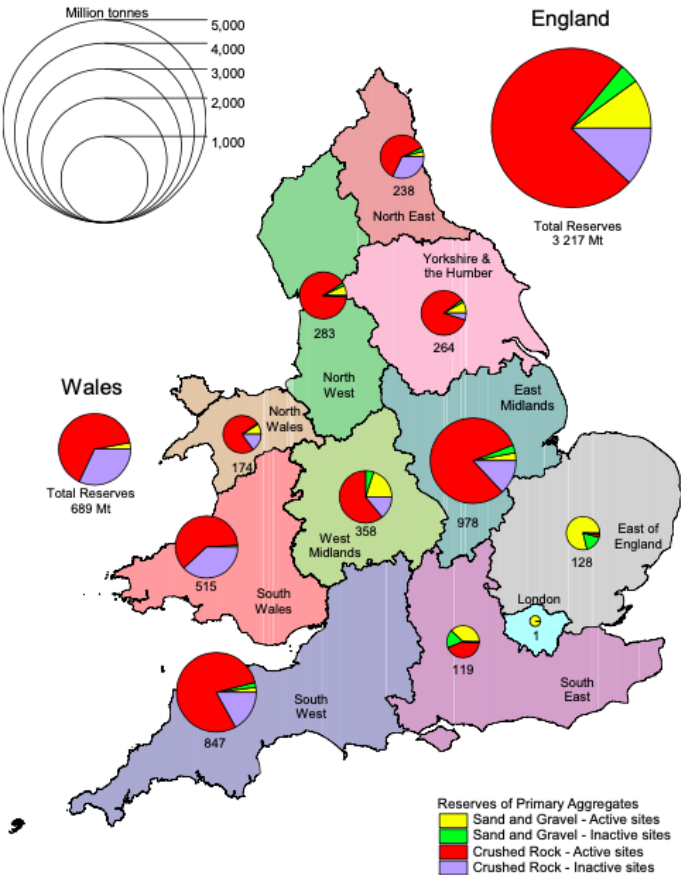
Marine dredged = c.20% of total sand and gravel

Managed Aggregates Supply System (MASS)

- **Local Aggregates Assessments**
 - Forecast of demand based on rolling average of 10 years sales and other relevant local information
 - Analysis of all supply options as indicated by landbanks, allocations and capacity data
 - Assessment of balance between demand and supply, and economic and environmental opportunities and constraints
- **Aggregates Working Parties** - regional groupings advising on demand & supply and monitoring performance
- **National Coordinating Group**
- **National & Sub-national Guidelines**

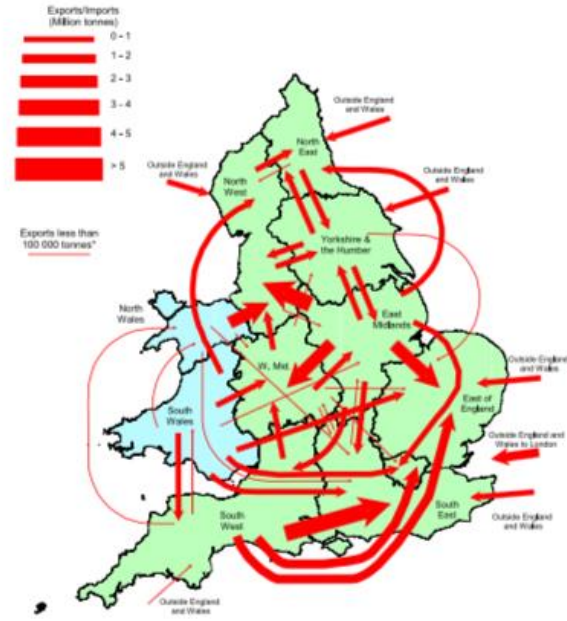


Map 10: Permitted reserves of primary aggregates in England and Wales – active and inactive sites, 2014



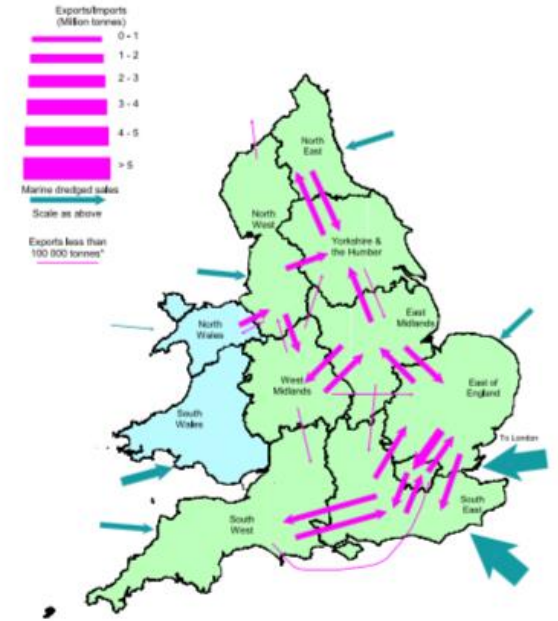
3.1g: Inter-regional flows of aggregates, 2014 (A). Source: BGS (AM surveys).

Crushed rock



*For clarity, exports less than 25 000 tonnes are not shown.

Sand & gravel



*For clarity, exports less than 25 000 tonnes are not shown.

- Guidelines out of date - benchmarks for AWP or MPAs
- National overview/coordination?
- Steady & adequate supply? Replenishment of reserves, planned provision
- Local Aggregates Assessments - backward-looking vs 'forecast of demand'
- Strategic planning - adequacy of Duty to Cooperate & Statements of Common Ground
- Where is the 'M' in MASS? Is planning delivering anyway?

Government response to NPPF Consultation

The Government acknowledges the support for an effective planning policy for minerals and the **need to facilitate security of supplies**, and the final Framework recognises that **a sufficient supply of minerals is essential**.

The Government recognises that **planning for minerals is essential** to increasing the supply of housing and other development, and that without updated guidelines, there is **a real risk of under-provision and possible sterilisation of mineral resources... the case that has been made for revitalising the MASS...** The Government intends to explore these issues after the publication of the Framework.



Mineral Products Association

AMPS 2019

**8th Annual Mineral Planning
Survey Report**

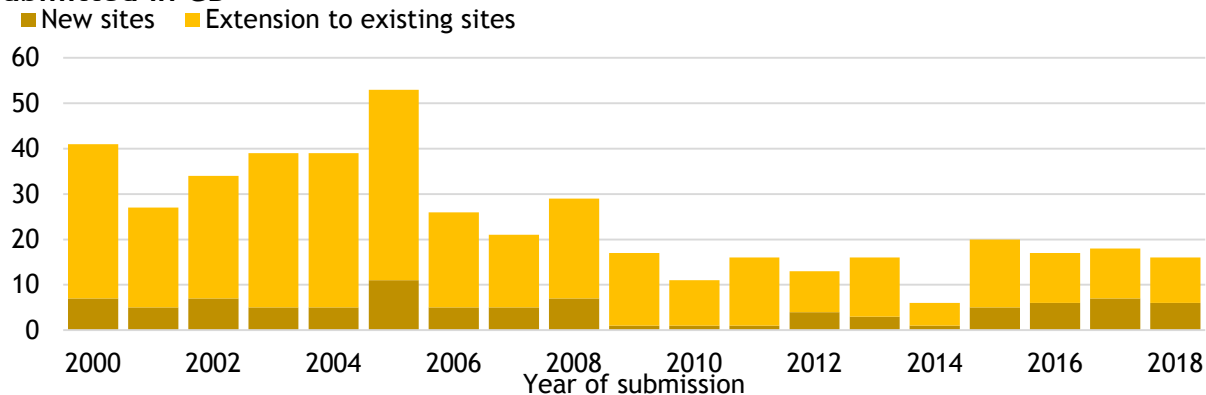
MPA Annual Mineral Planning Survey 2019

- Sales 2018: Increases in Rock and Sand & gravel
- Reserves & replenishment below parity (2009-18: 63% sand & gravel, 75% rock)
- Applications low (19 for new reserves), but approval rate high (>90%)
- Time to gain permission improving but still long (30 months)

Sand and Gravel

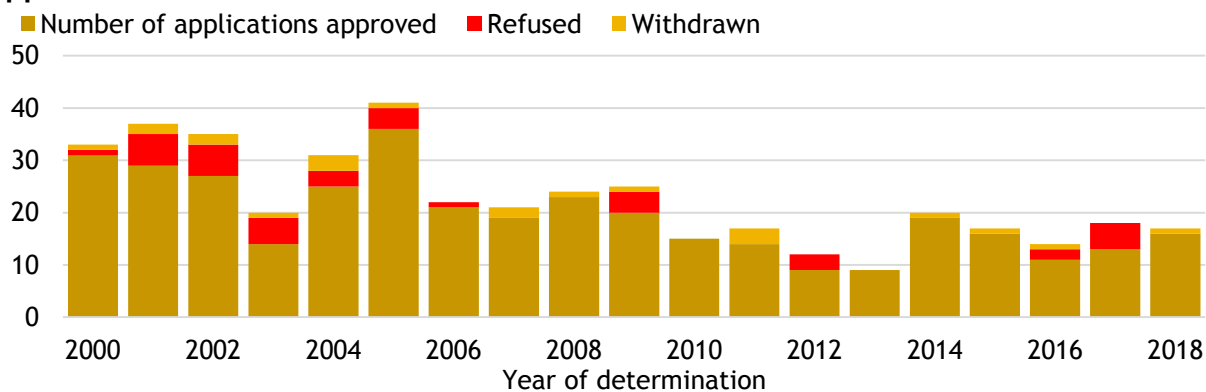
6 applications in 2018 and 2019

Number of land-won sand and gravel extraction applications submitted in GB



Vast majority permitted

How successful are land-won sand and gravel extraction applications in GB?



Sand and Gravel

Variable trend - increase in permitted tonnage 2018

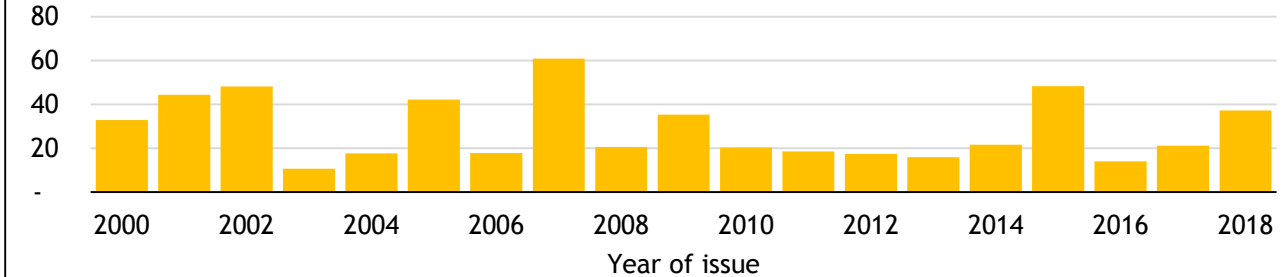
92% sales replenished through new permissions in 2018

Long-term (10 year) average 63%

Reserves depleting gradually

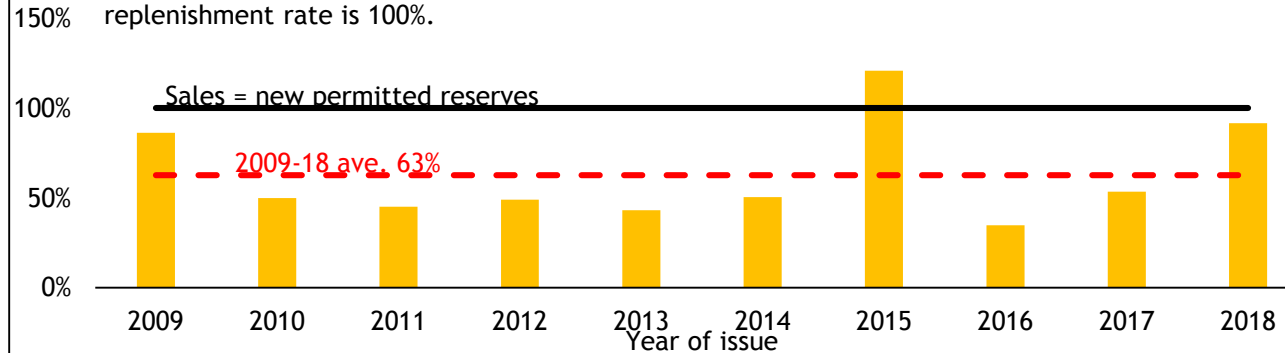
Volume of new land-won sand and gravel extraction permissions in GB

Million tonnes



Low replenishment rates point to falling land-won sand & gravel permitted reserves in GB

In any one year, if sales are equal to the volume of new permitted reserves, the replenishment rate is 100%.

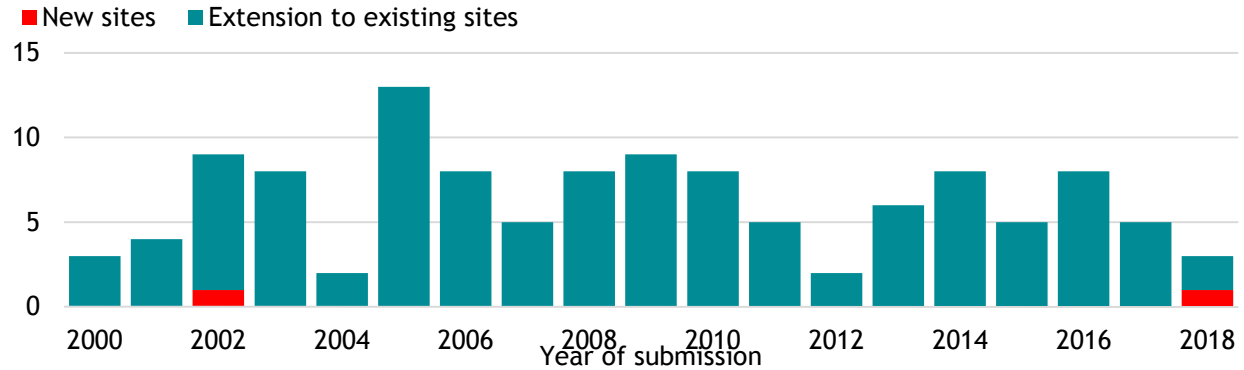


Crushed Rock

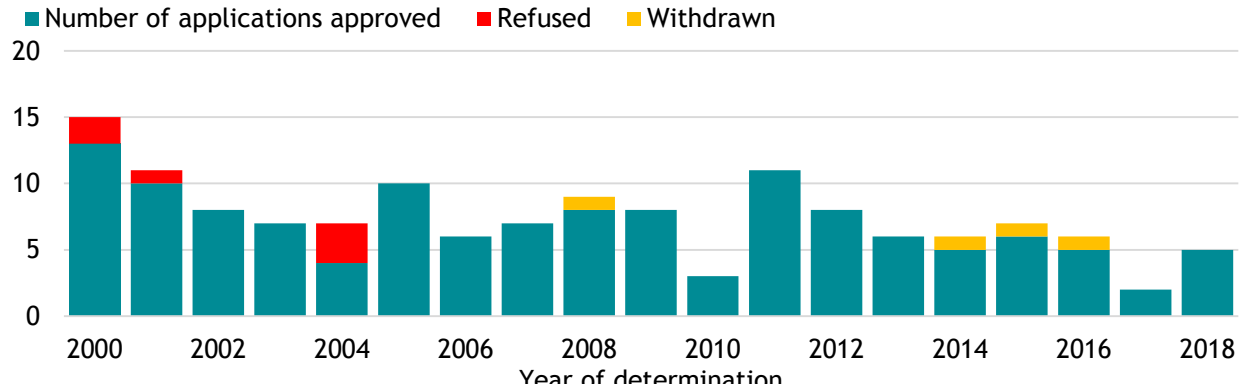
2 applications for extensions
1 new site

Vast majority permitted

Number of crushed rock extraction applications submitted in GB



How successful are crushed rock extraction applications in GB?



Crushed rock

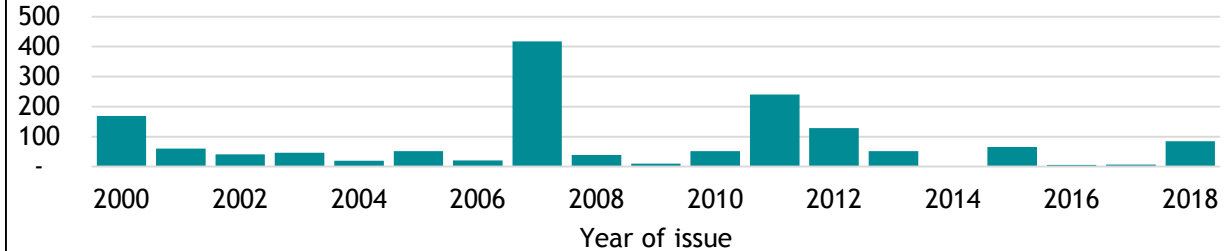
Sales (tonnage) exceeded permissions every year since 2012

10 year replenishment rate is 75%

BUT large reserves, although capacity to supply may be constrained

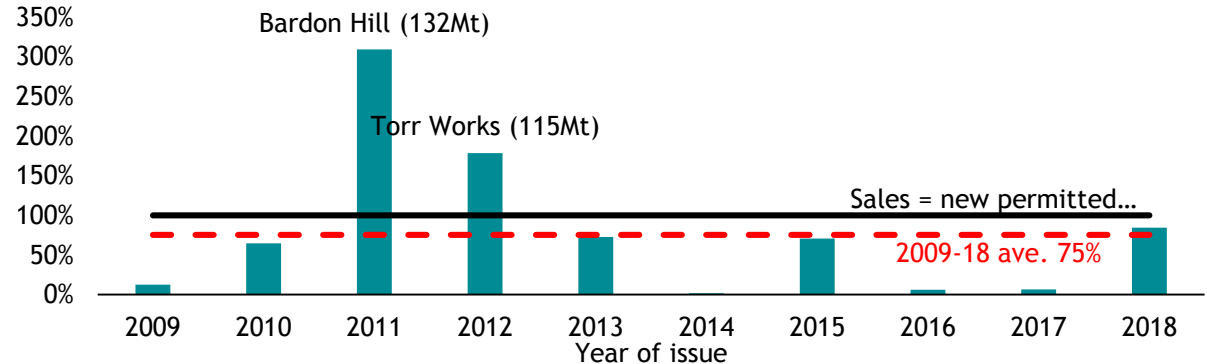
Volume of new crushed rock extraction permissions in GB

Million tonnes



Replenishment rates for crushed rock in GB remain well below parity since 2013

In any one year, if sales are equal to the volume of new permitted reserves, the replenishment rate is 100%.



Annual difference (in tonnes) between new permitted reserves and sales of Sand & Gravel

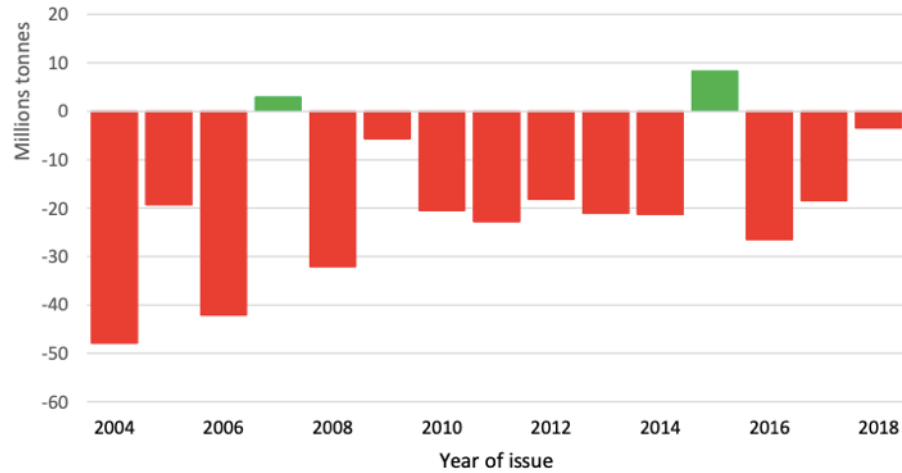


Figure 1: Land-won sand and gravel replenishment rates in GB

Annual difference (in tonnes) between new permitted reserves and sales (note 2005,2011,2012 dominated by major individual consents)

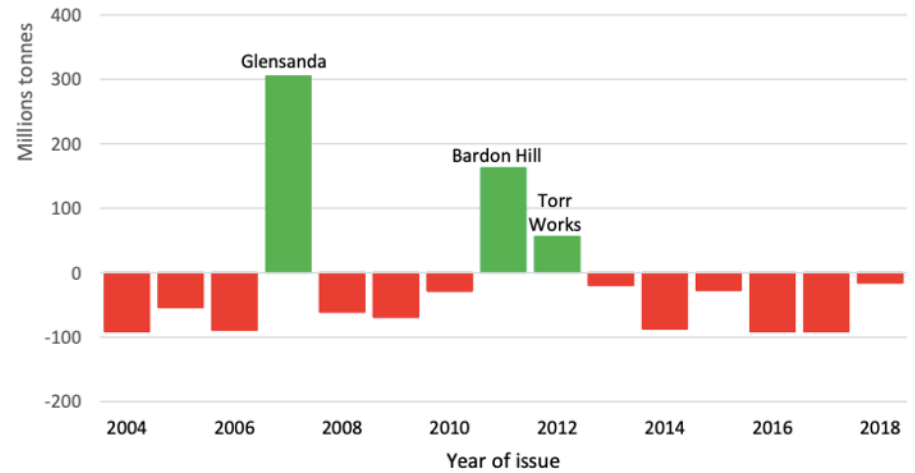
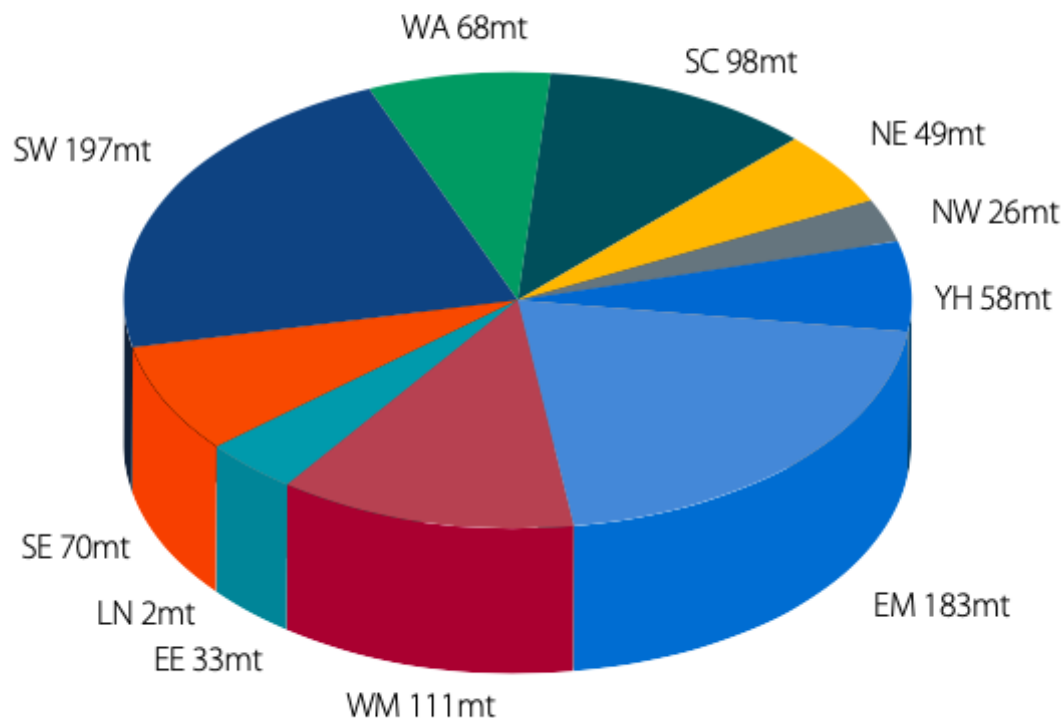


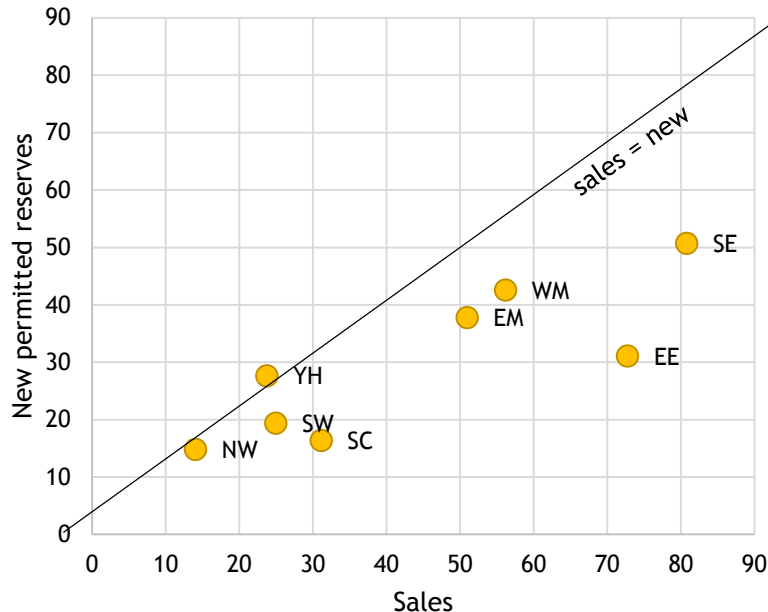
Figure 2: Crushed rock replenishment rates in GB

Figure 13. Regional tonnages approved for all land-won aggregates, 2009-18 (GB)



Regional sales volumes and new permitted reserves of sand & gravel, 2009-18

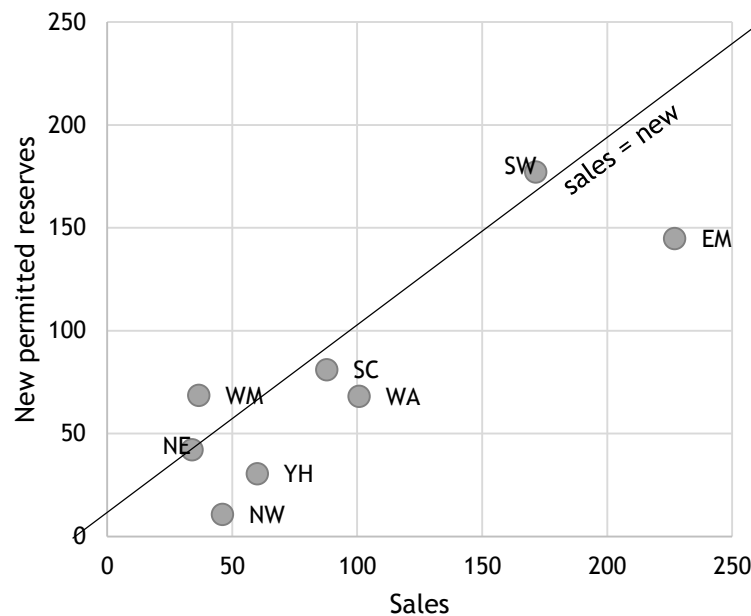
Million tonnes



- (1) All data are from MPA aggregates producers. Whilst the sample of producers reporting the new permitted reserves cover all MPA members, the sales sample is smaller, marginally under-representing total sales from MPA producers.
- (2) Permitted reserves include land-won aggregates only. The sales data include marine sand & gravel. This difference primarily affects the comparability in the

Regional sales volumes and new permitted reserves of crushed rock, 2009-18

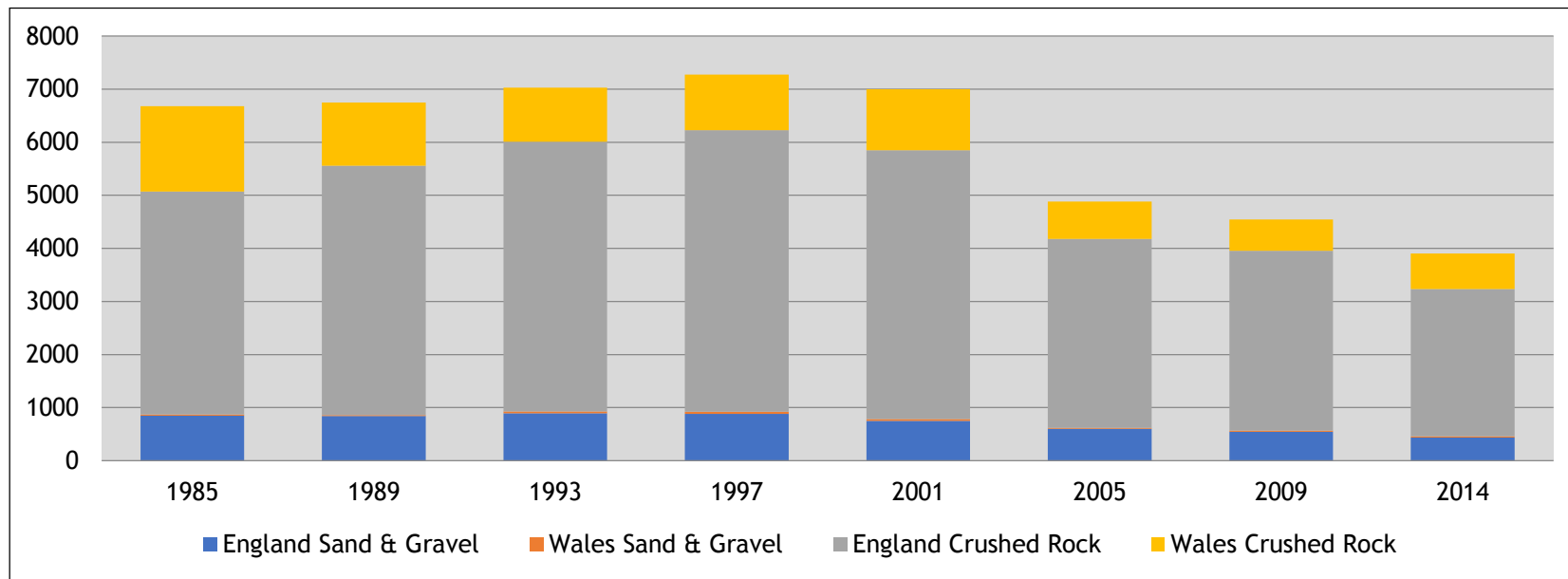
Million tonnes



- (1) All data are from MPA aggregates producers. Whilst the sample of producers reporting the new permitted reserves cover all MPA members, the sales sample

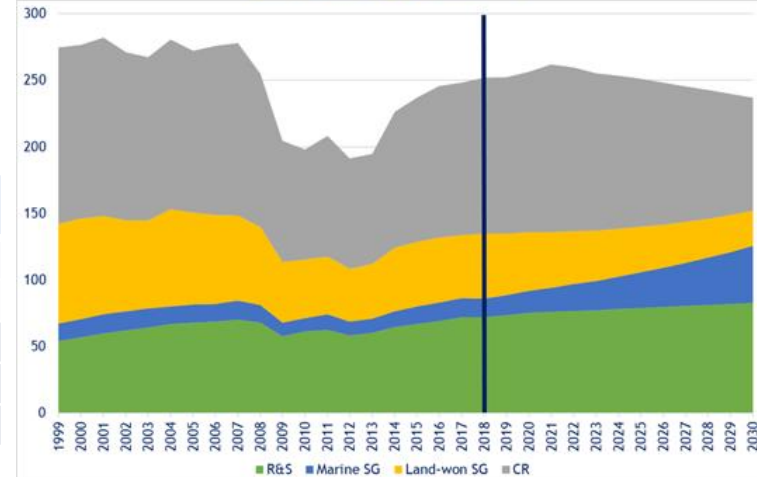
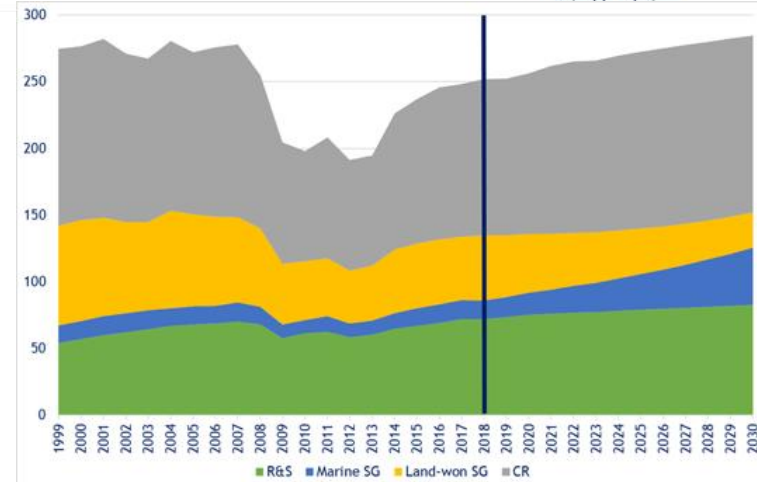
Aggregates Reserves (mt)

England & Wales - from AM reports



MPA Scenarios of demand & supply

- Drawing on economic, construction and population forecasts
- Demand: BAU and ‘low intensity’ scenarios
- Supply: BAU and changing mix
- Helping industry articulate what might be required, and assist planning
- c.3bn tonnes cumulative need to 2030



(Mt)	2018	Baseline 2030	Cumulative 2019-30	Low intensity 2030	Cumulative 2019-30
Total aggregates	252	285	3,244	237	3,004
R&S	72	83	941	83	941
Marine sand & gravel	14	43	322	43	322
Land-won sand & gravel	49	26	427	26	427
Crushed rock	117	133	1,554	85	1,313

The South West in the UK economy

8% (5.6m) of the UK population (2018)

7% (£133bn) of the UK Economy (2017)

Gross value added by sector in 2017:
South West



■ Agriculture ■ Production ■ Construction ■ Services

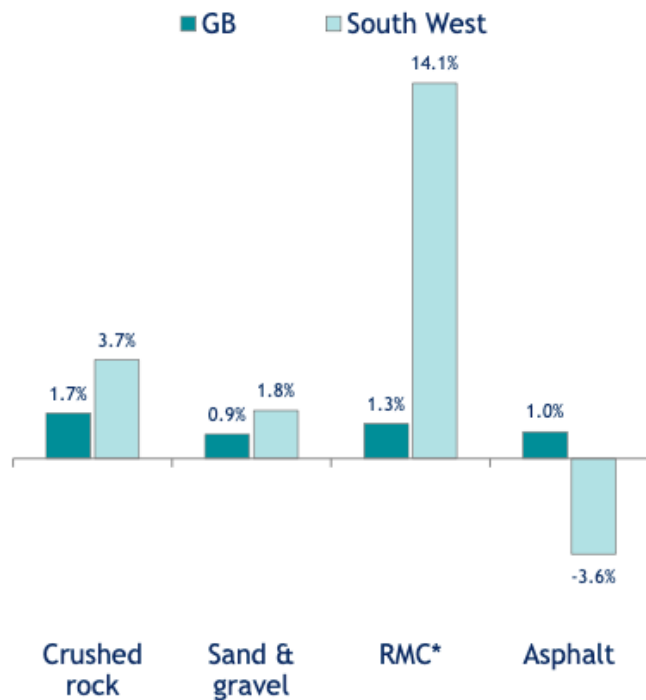


Mineral products sales



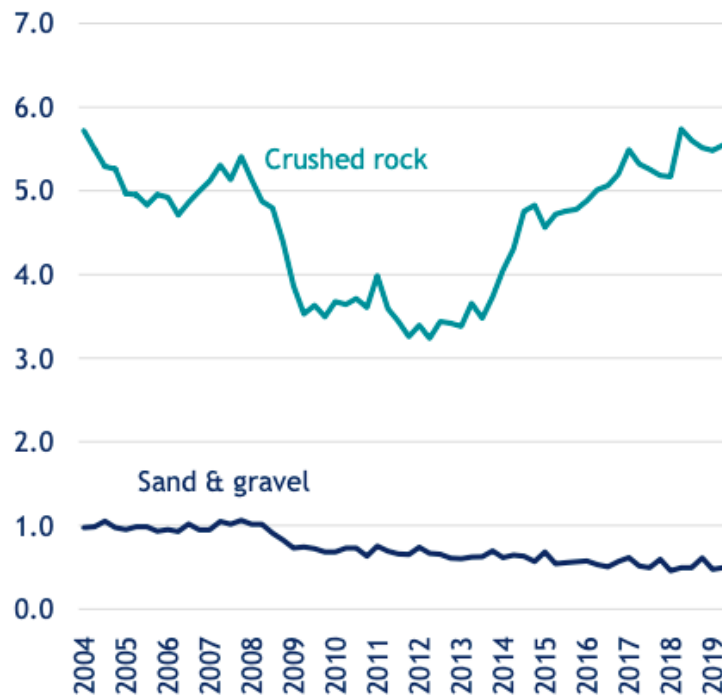
Mineral products sales

% change, 12 months to Jun-19 vs. prev. 12 months



Aggregates sales in the South West

Million tonnes, seasonally adjusted



Construction outlook 2019-23: South West

- Total construction is forecast to increase by an average of 2.2% pa over 2019-23, exceeding overall growth for the UK (1.3% pa);
- Growth in infrastructure work, driven by ongoing construction on Hinkley Point C, is expected to be the main contributor to construction output over the forecast period;
- Housebuilding, the regions' largest subsector, is also expected to grow throughout this period;
- Construction of the Avonmouth Resource Recovery Centre, part of a £1.5bn investment into recycling and recovery facilities should also provide some support to growth.



Safeguarding

Land won minerals

- Definition of Mineral Safeguarding Areas & Mineral Consultation Areas
- Clarity about process, information, responsibility

Wharves, railheads, infrastructure

- Weight given to local plan allocations, regeneration and housing
- Clarity over process, information, responsibility
- Application of Agent of Change

- Key role of Local Planning Authorities

https://mineralproducts.org/documents/MPA_POS_Minerals_Safeguarding_Guidance_Document.pdf

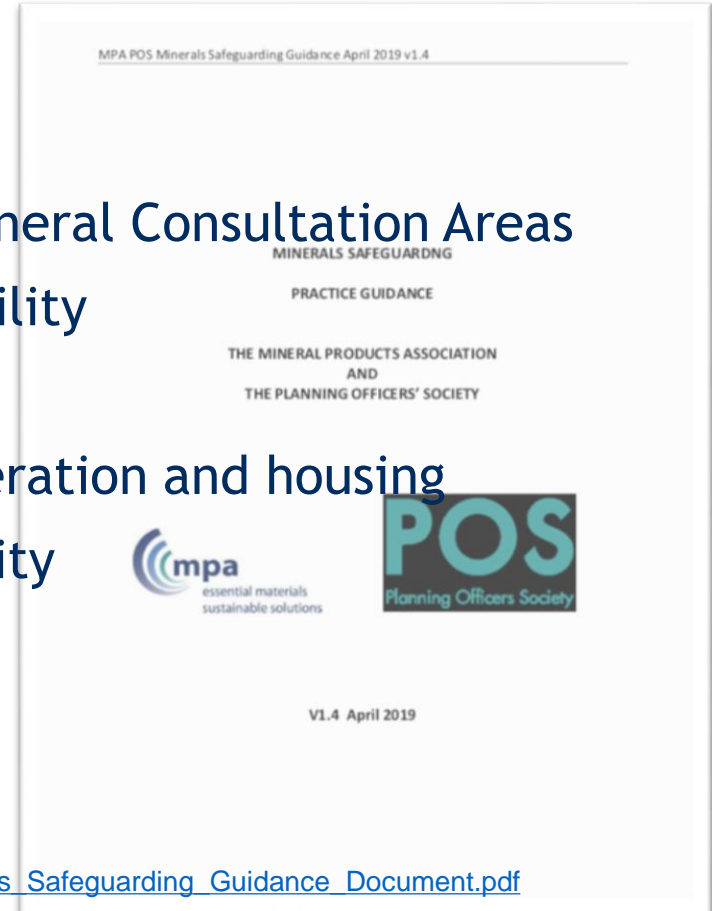
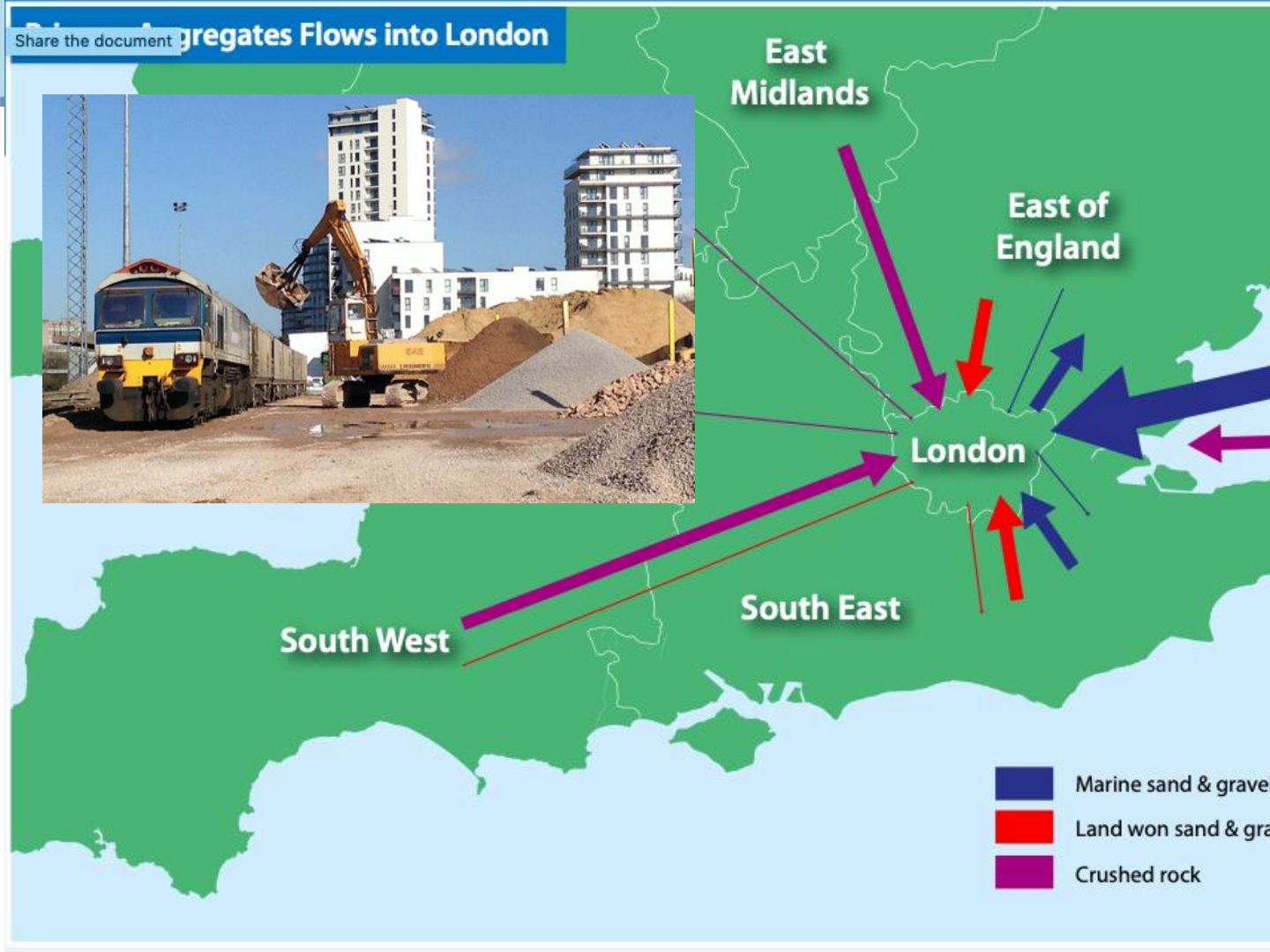


Table 1: Responsibilities for Safeguarding

Organisation	Role
Applicant/developer	Consult MSA and MCA maps. If within MSA/MCA, seek advice at pre-application stage from the local Planning Authority on the need to prepare a Minerals Resource/Infrastructure Assessment to demonstrate compliance with any safeguarding policy. Local Planning Authority or developer may also need specific advice from Minerals Planning Authority on scope.
Local Planning Authority (District/Borough/City in 2-tier areas)	<p><u>Local Plan and Site Allocations:</u> Consult the Mineral Planning Authority and MSA/MCA maps and at the earliest opportunity in the plan-making and site allocation process.</p> <p>Assess effect of plan options on mineral resources as part of SA/ SEA process associated with Plan.</p> <p>Avoid allocations in MSAs where possible.</p> <p>If an allocation is proposed within MSA, identify minerals as an issue for development of the site and consider opportunities for mitigating sterilisation, including extraction of mineral prior to/as part of/requirement of development. Require Minerals Resources Assessment in site allocation policy.</p> <p>Avoid allocations proximate to safeguarded infrastructure where possible.</p> <p>If allocation is proposed proximate to safeguarded quarry or infrastructure, consider sensitivity of development and potential constraining impact on minerals operations, and require that mitigation measures are included to reduce the potential sensitivity of the proposed non-minerals development which avoid constraining the operation in line with the 'agent of change' principle (see para 3.7 and NPPF para 204e). The Local Plan can refer to the Minerals Local Plan and include safeguarding requirements in site allocation policy.</p> <p><u>Development Management/Applications</u> Consult the Mineral Planning Authority on applications in MSAs/MCAs at the earliest opportunity.</p> <p>Alert applicants to minerals safeguarding policies and the need for Minerals Resource/Infrastructure Assessment as early as possible including pre-application.</p> <p>Include the requirement for a Minerals Resource/Infrastructure Assessment in the Local Validation List.</p>
Minerals Planning Authority	Provide advice to District Planning Authorities on: <ol style="list-style-type: none"> 1) proposed Local Plan allocations for built development – on level of mineral resource assessments required from developers; 2) pre application discussions; and 3) planning applications in MSAs

Table 2 Example Policy content and evidence requirements

Safeguarding of Mineral Resources	
Criteria	Matters to address in Mineral Resource Assessment (MRA)
Minerals are not of current or potential economic or heritage value or would not be sterilised, or	Resource quality, quantity, economic and/or heritage value, sterilising effect of development on safeguarded minerals.
It would be inappropriate/not viable to extract mineral at this location, or	Constraints (environmental, amenity, transport/accessibility) & policy.
It would not conflict with mineral extraction at this site, or	Site assessment of sensitivity of development and mitigation measures.
Minerals can be extracted prior to the development proceeding, without adversely affecting the viability of the development, or	Site-specific assessment of viability of prior extraction taking account of constraints & opportunities; evidence of market for the material and proximate processing.
Safeguarding of Minerals Infrastructure	
Criteria	Matters to address in Minerals Infrastructure Assessment (MIA)
Development will not involve loss of site or capacity, and not have an unacceptable detrimental effect on operations; or	Nature of safeguarded facility/operation; proximity & screening; sensitivity of proposed development, mitigation measures including noise insulation, orientation and aspect, layout to avoid sleeping and living areas overlooking the site.
The safeguarded facility affected is not viable or required; or	Evidence from site operator and assessment of throughput and capacity.
The capacity of the infrastructure can be satisfactorily re-located elsewhere prior to its loss.	Availability of alternative sites, their suitability and deliverability.



For London's housing, building and infrastructure to improve and grow it needs 10 million tonnes of primary aggregates every year. That means:

820,000 tonnes every month

192,000 tonnes every week

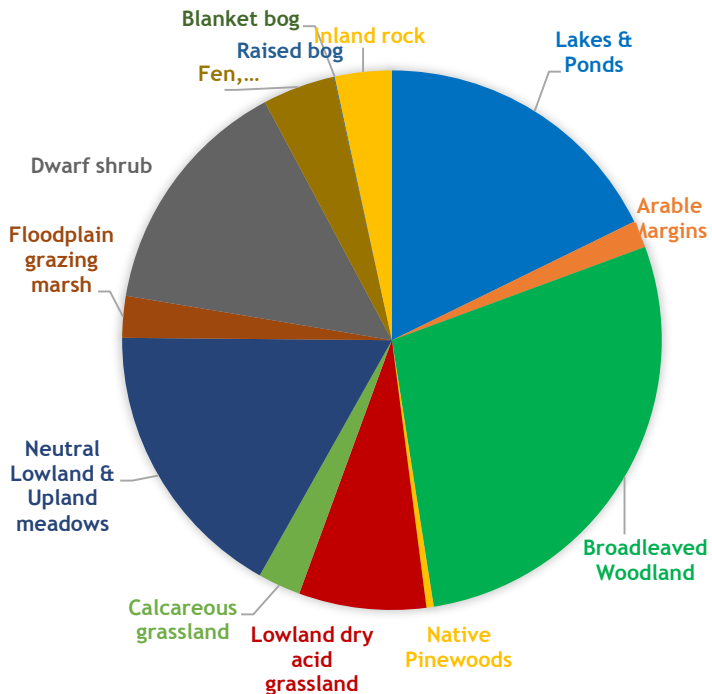
27,000 tonnes every day



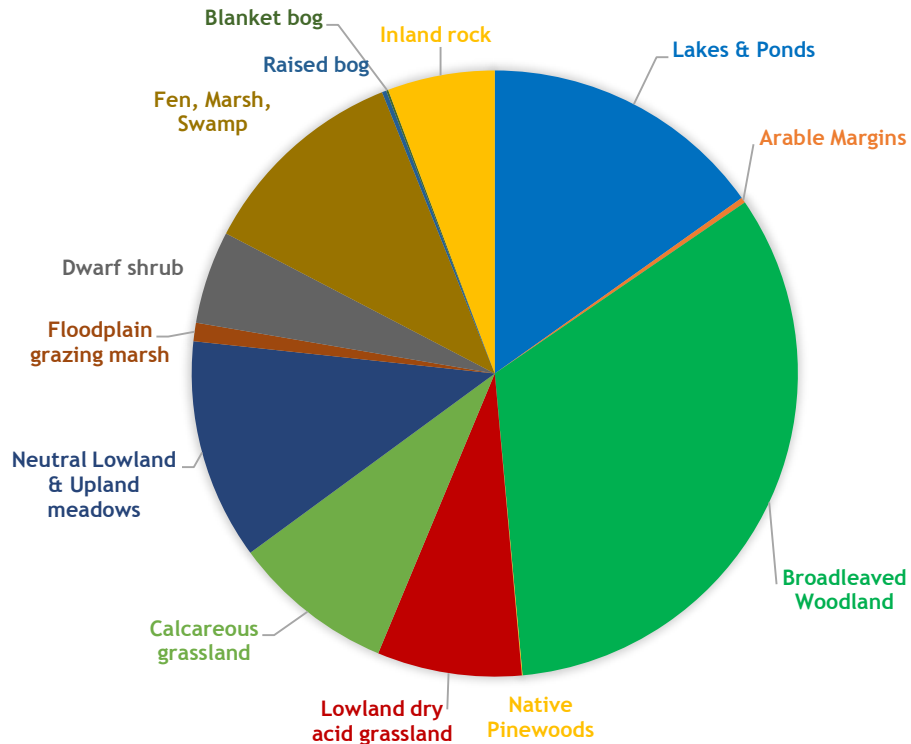


UK Priority Habitats - MPA member contributions

CREATED TO DATE (>8,300 HA)



PLANNED - NOT YET DELIVERED (>11,000 HA)



Biodiversity Net Gain

- Environment Bill - mandating +10% through planning
- 'Metric' to quantify losses & gains in biodiversity units
- Designed for housing & infrastructure
- Application to minerals:
 - Temporary development
 - Timescales & phasing
 - Tradable offsets for others

BOX 2-2: Calculating the biodiversity unit value of a habitat

How we calculate biodiversity value for habitats is illustrated in the scenario below:

- The pre-intervention calculation that establishes the baseline biodiversity unit value of a habitat. In essence, that multiplies the size of a habitat parcel by its 'quality' scores, and
- The post-intervention calculation that gives you the biodiversity unit value of a habitat after it has been changed. This calculation also takes account of the difficulty and time it takes to create the new habitat.

How these calculations are used in an example scenario is illustrated in BOX 2-3. *N.B. In this example the 'high' connectivity score has been derived from local data.*

PRE-intervention biodiversity calculation (the baseline)

Size of habitat parcel	x	Distinctiveness	x	Condition	x	Strategic location	x	Connectivity	=	Biodiversity units
10 (ha)	x	6 (high)	x	1 (poor)	x	1.15 (high)	x	1.15 (high)	=	79 units

POST-intervention biodiversity calculation (for newly created habitat)

Size of habitat parcel	x	Distinctiveness	x	Condition	x	Strategic location	x	Connectivity	x		=	Biodiversity units
10 (ha)	x	6 (high)	x	3 (good)	x	1.15 (high)	x	1.15 (high)	x		=	133 units

Difficulty x Time to target condition x Off-site risk = Biodiversity units
0.7 (med) x 0.8 (5 yrs) x 1 (local)

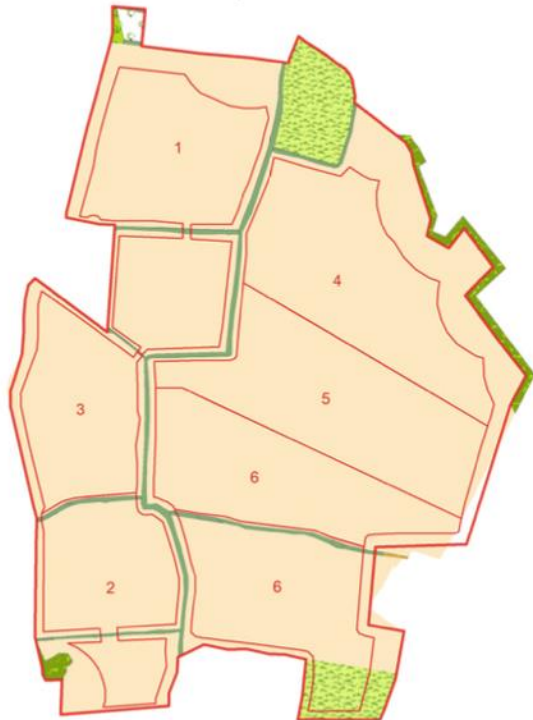
Calculation of gains or losses

The net effect of an intervention (or a series of interventions) on biodiversity is calculated as follows:

POST units	-	PRE units	=	Net change
133 units	-	79 units	=	+54 units

Habitat parcel	Risk factor
Measure of biodiversity quality	Value in biodiversity units

Wivenhoe before development habitats

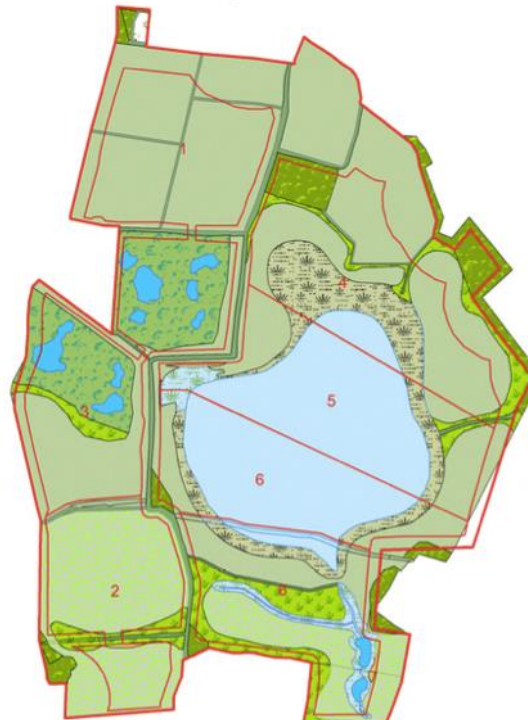


Legend

Before development habitat	Lowland Mixed Deciduous Woodland	Phases
Arable	Poor semi-improved grassland	Application_boundary
Arable Field Margin	Scrub	
Hedgerow	Traditional Orchard	

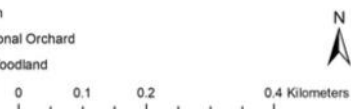


Wivenhoe after development habitats



Legend

After restoration habitat	Pond	Phases
Hedgerow	Reedbed	Application_boundary
Lowland Heathland	Sand Bank	
Lowland Meadow	Scrub	
Lowland Mixed Deciduous Woodland	Stream	
Marginal Aquatic Vegetation	Traditional Orchard	
Mesotrophic Lake	Wet Woodland	



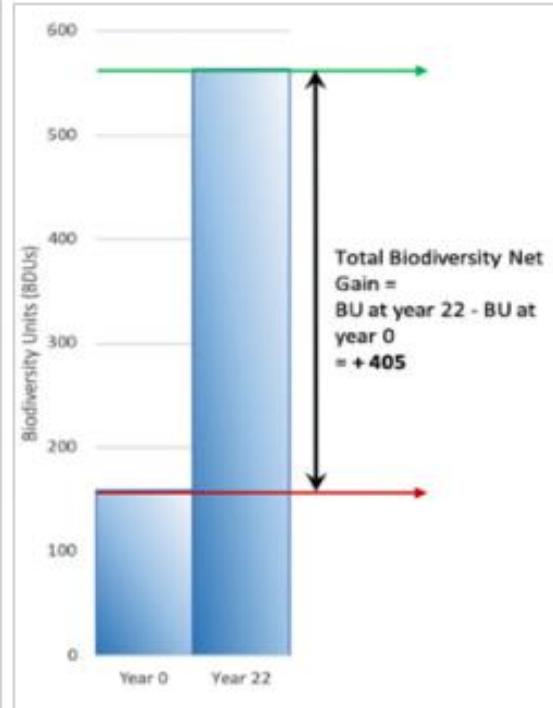
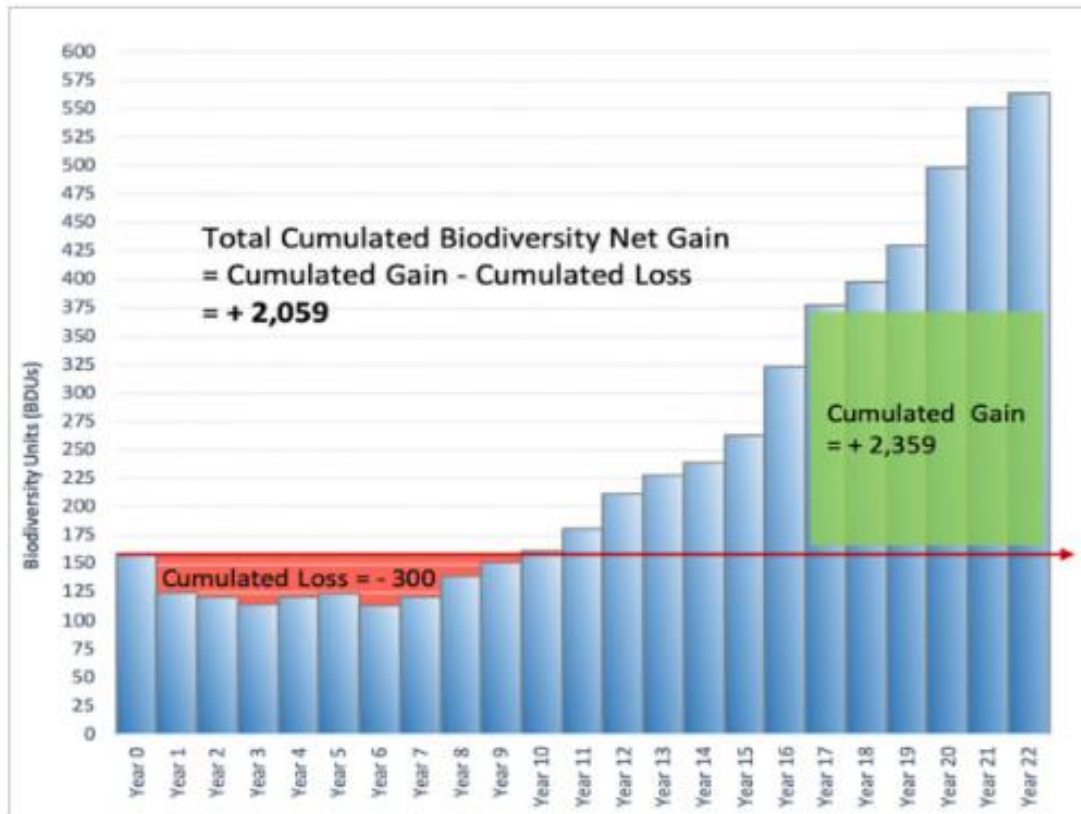


Figure 6: Cumulative BNG following the year-by-year method for Wivenhoe quarry (left) and total BNG of Wivenhoe quarry following the standard metric 2.0 method (right).

UK Minerals Strategy

Meeting the demand for minerals and mineral products sustainably for the next 25 years

A Strategy prepared by the UK minerals and mineral products industry, facilitated by members of the CBI Minerals Group and the Mineral Products Association

July 2018

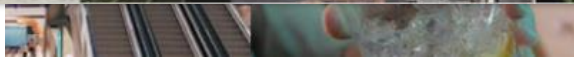
The Strategy

The aim of the Strategy is to ensure that UK demand for minerals and mineral products is supplied sustainably for the next 25 years. This will require identifying and permitting at least 5 billion tonnes of mainly construction and industrial minerals to be sourced primarily from indigenous resources.

To achieve this, Government and relevant stakeholders should:

- recognise that minerals and mineral products, and the industry that supplies them, are essential to the economy and our quality of life;
- recognise that supply cannot be assumed; it needs to be planned, monitored and managed;
- ensure steady and adequate provision is made, primarily through the land use planning system; and
- establish supportive policy, operating and trading conditions to enable UK industry to thrive and invest in future supply.

Of overriding importance is the requirement for a strong national minerals and mineral products policy and statement of need. These would inform and underpin national, regional and local planning to enable sufficient minerals and mineral products to be supplied to key sectors of the economy.



ECONOMIC



DEMAND & IMPORTANCE

Government should provide clear national policy and a statement of need for minerals and mineral products to underpin local plan-making, policy and decisions to enable a steady and adequate supply of minerals and mineral products to be maintained.



SUPPLY & DISTRIBUTION

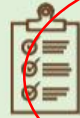
The **Industry** will submit sufficient planning or marine licence applications. Mineral planning authorities and marine regulators should ensure that sufficient sites are allocated in plans and consents or marine licences granted, to maintain a steady and adequate supply of minerals and mineral products to meet demand, while also ensuring that reuse and recycling is maximised.



TRADE & INVESTMENT

Government should ensure there is a supportive regulatory, operating and trading environment to encourage investment, trade and export of UK minerals and mineral products, and reduce risks from insecurity of international supply.

ENVIRONMENTAL



PLANNING & REGULATION

Government should ensure that the mineral planning system is properly resourced to operate effectively and that duplication with other regulation, particularly environmental permitting, is minimised.



ENVIRONMENTAL BENEFITS

The **Industry** will aim to deliver environmental net gains through responsible site management and high quality restoration, adding to the wild life, recreational and landscape assets already created.



ENVIRONMENTAL IMPACTS

The **Industry** will continue to avoid and mitigate the impacts of extraction, processing, manufacturing and transportation as part of the transition to a low carbon and circular economy.

SOCIAL



EDUCATION, SKILLS & EMPLOYMENT

The **Industry** will continue to provide attractive career opportunities and meet skills needs for a modern, healthy, safe, well-educated and diverse workforce and encourage people to choose to work in the industry.



PUBLIC UNDERSTANDING & ENGAGEMENT

The **Industry** and **Government** should work with stakeholders to improve public understanding of the need for minerals and mineral products and their associated supply chains, and strengthen the evidence base and availability of relevant data.



RESEARCH & INNOVATION

The **Industry** will encourage and invest in innovation, research and development, including the identification of new resources and the development of new markets.



- Steady & adequate supply at risk
- Proper forecasting of demand needed
- Industry needs to promote sites, and secure reserves
- Planned provision to meet forecast demand
- Means of supply better safeguarded
- Increasing requirements and scrutiny - carbon, natural capital, health... and opportunities
- Planning reform, modern construction methods
- Making the [Link](#)

Thanks for listening

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