





# **Aggregate Minerals Survey 2023 for Great Britain**

# FORM A: Quarries producing land-won natural aggregates<sup>1</sup>, and Marine Wharves for sand and gravel and crushed rock during 2023

#### **BACKGROUND INFORMATION**

The Aggregate Minerals Survey provides an in-depth and up-to-date understanding of regional and national sales, consumption, distribution, and permitted reserves of natural aggregates. The information is collected from aggregates producers in England, Wales and Scotland.

The results of the surveys are used to inform the development of minerals policy at a national and local level to help plan for the steady and adequate supply of construction minerals. Results of the surveys also allow the aggregates industry to understand current national and regional supply.

This survey relates to aggregate sales, distribution, and reserves from 01 January to 31 December 2023.

The national collation of this survey is being undertaken by the British Geological Survey for the UK, Welsh and Scottish Governments.

The results of the AM2023 Survey will be used to monitor policies for the supply of aggregates

## **ABOUT THIS DATA COLLECTION**

The data collection for the Aggregate Minerals Survey includes both commercially confidential information and personal data. The personal information you provide will not be included in the Aggregate Minerals Survey Report 2023. The level of disaggregation of data included in the results tables published in the Aggregate Minerals Survey will be subject to respecting commercial confidentiality restrictions. Collated data may also be used for the purposes of mineral policy work by the respective governments as well as Mineral Planning Authorities.

For more information about the use of the data that you provide, together with your personal data, please refer to the 'Privacy Notice' accompanying this form.

This form is for use by quarries and wharves in **England and Wales**.

Completed forms should be returned either by email or in envelopes marked 'Confidential' to:	

Please return the completed form no later than <u>01 May 2024</u>.

<sup>1</sup> Aggregates – Granular material used in construction. Aggregates can be natural, recycled or manufactured. This form relates to natural aggregates, both primary and secondary (or by-product) aggregates, excavated and sold for the first time.

BGS HELPLINE: If you have any queries regarding this form please contact Don Cameron at the British Geological Survey by e-mail (AMsurvey@bgs.ac.uk) or alternatively by telephone on 0115 936 3489 (Tues - Thurs)

# NON-CONFIDENTIAL

# SITE DETAILS

Please tick the box to indicate that	you have read and accepted the privacy notice:	П
ricase lick life box to indicate that	you have read and accepted the privacy notice.	Ш

SD1	Your name		
SD2	Your email address		
SD3	Your telephone number		
SD4	What is the name of the quarry or wharf at this site?		
SD5	Address		
SD6	Address 2		
SD7	City/Town		
SD8	County		
SD9	Postal Code		
SD10	Country		
SD11	Site telephone number		
SD12	What is the name of the operating company at this site?		
(1) (2)	Quarries / other sites producir product of building stone, silica	se notes before completing the form. This form applies to: g land-won natural aggregates either as a principal activity or as a subsidiar a sand, china clay, ball clay, slate, clay, shale and coal extraction. ne-dredged sand and gravel and / or crushed rock are landed.	y activity, such as a by-
(3)	site where no mineral develop February 1982 and 6th June 1	'inactive' sites and 'dormant' sites. The latter is defined in the Environment ament has taken place to any substantial extent in, on, or under the site at an 995.    Question 3 for these materials.	
(3)	site where no mineral develop February 1982 and 6th June 1	ment has taken place to any substantial extent in, on, or under the site at an 995.	
(3)	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status:	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry <sup>(1)</sup> Marine wharf <sup>(2)</sup> Mineral Products Association member	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry <sup>(1)</sup> Marine wharf <sup>(2)</sup>	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status:	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry (1)  Marine wharf (2)  Mineral Products Association member  British Aggregates Association member  None of the above  Active during 2023: In production, including from stockpiles, for some time during 2023  Inactive during 2023: Worked in the past and still containing permitted	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status: (please tick relevant box(es))  Status of quarry / wharf / other site:	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry (1)  Marine wharf (2)  Mineral Products Association member  British Aggregates Association member  None of the above  Active during 2023: In production, including from stockpiles, for some time during 2023  Inactive during 2023: Worked in the past and still containing permitted reserves. [Complete only Question 1 for permitted reserves] (3)  Inactive during 2023: Planning permission received, but yet to be worked	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status: (please tick relevant box(es))  Status of quarry / wharf / other site:	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry (1)  Marine wharf (2)  Mineral Products Association member  British Aggregates Association member  None of the above  Active during 2023: In production, including from stockpiles, for some time during 2023  Inactive during 2023: Worked in the past and still containing permitted reserves. [Complete only Question 1 for permitted reserves] (3)	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status: (please tick relevant box(es))  Status of quarry / wharf / other site:	ment has taken place to any substantial extent in, on, or under the site at an 995.  Question 3 for these materials.  Quarry (1)  Marine wharf (2)  Mineral Products Association member British Aggregates Association member None of the above  Active during 2023: In production, including from stockpiles, for some time during 2023  Inactive during 2023: Worked in the past and still containing permitted reserves. [Complete only Question 1 for permitted reserves] (3)  Inactive during 2023: Planning permission received, but yet to be worked [Complete only Question 1 for permitted reserves] (3)  Dormant site: As identified under the Environment Act 1995 (3)	y time in the period 22nd
(3) (4) TM1	site where no mineral develop February 1982 and 6th June 1 Complete only Question 2 and Type of mineral operation (please tick relevant box)  Association status: (please tick relevant box(es))  Status of quarry / wharf / other site:	ment has taken place to any substantial extent in, on, or under the site at an 1995.  Question 3 for these materials.  Quarry (1)  Marine wharf (2)  Mineral Products Association member  British Aggregates Association member  None of the above  Active during 2023: In production, including from stockpiles, for some time during 2023  Inactive during 2023: Worked in the past and still containing permitted reserves. [Complete only Question 1 for permitted reserves] (3)  Inactive during 2023: Planning permission received, but yet to be worked [Complete only Question 1 for permitted reserves] (3)  Dormant site: As identified under the Environment Act 1995 (3)  [Complete only Question 1 for permitted reserves]  Closed and containing no workable permitted reserves  [Complete only site details]  Primary aggregates  Secondary aggregate  Sand (only)  China clay aggregate gall clay aggregate ligneous rock (including Metamorphic)  Slate waste sold a Colliery spoil sold	egates gate (sand or 'stent') (4) te (sand) (4) as aggregate (4)

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## SITE STATUS DETAILS CONTINUED

MPA1	MPA name					
NGR1	National Grid Reference (of centre of working, e.g. NG 456 789)					
		Code	Easting	Northing		
DS1	Please tick here if the site is a borr construction project)	row pit (a tempora	ry mineral working to supply aggreg	ate for a specific		
DS2	Please tick here if the site has rece	eived planning per	mission for an extension in 2023			
DS3	Please tick here if this is a new qua	arry or wharf gran	ted planning permission in 2023			
DS4	Date current planning permission for extraction expires (if stated) (dd/mm/yyyy)					
	Please tick as appropriate if the area for extraction within the planning permission is wholly or partly within any of the following environmental designations. The site may fall within more than one designation:					
DS5	National Park (including The Broad	ds)				
DS6	National Landscape (formerly Area of Outstanding Natural Beauty) - England  Area of Outstanding Natural Beauty - Wales					
DS7	Site of Special Scientific Interest					
DS8	National Nature Reserve					
DS9	Special Area of Conservation / Spe	ecial Protection A	rea			
DS10	Green Belt					

# 1. PERMITTED RESERVES (AT QUARRIES ONLY)

# **DEFINITIONS**

**Permitted Reserves -** Estimated reserves of aggregate minerals, including stockpiles, with planning permission that are saleable for aggregates and non-aggregate purposes at 31st December 2023. The figure should estimate **net saleable** reserves, taking account of likely losses during extraction and processing.

Also **include** reserves at Inactive and Dormant sites. A Dormant site is defined in the Environment Act 1995 as a mineral site where no mineral development has taken place to any substantial extent in, on, or under the site at any time in the period 22nd February 1982 and 6th June 1995.

## GUIDANCE NOTES - please read these notes before completing the form.

<sup>(1)</sup> Where possible estimate the amount of sand or gravel for each category.

<sup>(2)</sup> Where not known this can be estimated on the basis of typical proportions of sales of aggregate to non-aggregate.

Sand	and Gravel Reserves	Tonnes
1.1	Sand suitable for concreting <sup>(1)</sup>	
1.2	Sand suitable for mortar (building sand) <sup>(1)</sup>	
1.3	Sand suitable for asphalt <sup>(1)</sup>	
1.4	Undifferentiated sand, where not included above <sup>(1)</sup>	
1.5	Gravel <sup>(1)</sup>	
1.6	Sand and gravel undifferentiated, where not included above <sup>(1)</sup>	
1.7	Estimated % of total reserves allocated for non-aggregate use (2)	

Crushe	ed Rock Reserves	Tonnes	1.13 Estimated % of total reserves allocated for non-aggregate use (2)
1.8	Limestone / Dolomite		%
1.9	Igneous and Metamorphic rock		%
1.10	Sandstone (including gritstone, greywacke & quartzite)		%
1.11	Chalk		%
1.12	Ironstone		%

## 2. SALES BY PRODUCT

2.1 Sand and Gravel

## (Land won and marine-dredged)

## INSTRUCTIONS

The term sand and gravel includes 'solid' sandstones and conglomerates that are loosely consolidated or weakly cemented and that are processed to produce sand and gravel, e.g. sandstones of the 'Sherwood Sandstone / Bunter' type sandstones and pebble beds. For sales of sand (fine aggregate) derived from crushing hard rocks, e.g. Carboniferous type sandstones, please return under question 2.2.7.

## GUIDANCE NOTES - please read these notes before completing the form (Section 2.1).

- Questions 2.1.1 2.1.9 should be filled in for sales of sand and gravel excavated from a quarry (including as a result of <u>ball clay</u> or <u>china clay</u> extraction), or sales only of marine dredged (from English and Welsh waters) sand and gravel landed at a wharf. For quarries, <u>exclude</u> minerals produced elsewhere in England and Wales and brought to the site for processing. Where aggregate is taken to another site for processing please estimate the sales attributable to the actual excavated site. For wharves, <u>exclude</u> sand and gravel transhipped to another wharf in England and Wales. (The receiving wharf will be completing these questions).
- 2.1.1 Including sand used in ready-mixed concrete and precast concrete products e.g. concrete bricks, blocks, tiles, pavers and pipes.
- 2.1.5 Including gravel used in ready-mixed concrete and precast concrete products e.g. concrete bricks, blocks, tiles, pavers and pipes.
- 2.1.6 Other aggregate uses include pipebedding, drainage media/layers.
- 2.1.7 Aggregate used for constructional fill, including 'as dug' material (hoggin).
- 2.1.8 Total is automatically calculated if the form is completed electronically.
- 2.1.9 Other non-aggregate / industrial uses for sand (and gravel) include for glassmaking, foundry use, chemicals, ceramics, water filtration, brickmaking (body / facing sand and calcium silicate bricks), sports and horticultural uses.
- 2.1.10 For wharves landing sand and gravel originating from outside English and Welsh waters only.

Sand for aggregate use	Tonnes
Sand for concreting or sharp sand	. G.III.G.
Sand for use in mortar (building or soft sand)	
Sand for asphalt	
Gravel for aggregate use	Tonnes
Gravel for asphalt	Tomico
Gravel for concrete aggregate	
Other screened and graded gravels	
Sand and Gravel for aggregate	Tonnes
Other sand and gravel e.g. for constructional fill, where not included above	Torines
Total for all aggregate use	Tonnes
Sand and Gravel for non-aggree	e uses Tonnes
Total for all non-aggregate uses	Toffines
	Sand for asphalt  Gravel for aggregate use  Gravel for asphalt  Gravel for concrete aggregate  Other screened and graded gravels  Sand and Gravel for aggregate use  Other sand and gravel e.g. for constructional fill, where not included above  Total for all aggregate use  Sand and Gravel for non-aggregate  Total for all non-aggregate

# 2.1.10 Landings of sand and gravel from OUTSIDE English and Welsh waters (wharves only)

# GUIDANCE NOTES Please provide the tonnage of total sales for <u>aggregate use</u> originating from each country.

Country of origin	Landings of aggregate (tonnes)
Scotland	
Northern Ireland	
Republic of Ireland	
France	
The Netherlands	
Belgium	
Denmark	
Norway	
Other countries	
Unknown	
Total tonn	age

(Quarries <u>in</u> England and Wales and

2. SALES BY PRODUCT

2.2 Cru	iehad Kuck '	Wharves at which hard rock from <u>ou</u>	tside England and Wales is landed)	
	(please tick box) □ □ □	Igneous rock (including Metamorphic) Limestone / Dolomite Sandstone Chalk Ironstone	<ul> <li>☐ China clay 'stent' (unkaolinised rock)</li> <li>☐ Colliery spoil (minestone)</li> <li>☐ Clay' and 'Shale' for construction</li> <li>☐ Slate waste sold as aggregate</li> </ul>	
If more	than one mineral type, please p	print an extra copy of Questions 2 and	3, for each, and attach onto back of form.	
	ne / Dolomite includes high mag	gnesium limestone but not chalk.		
trachyte Sandsto		e and quartzite.	anulite, hornfels, microgranite, rhyolite, schist, syenit	e,
China cl	ay aggregate (unkaolinised rocl	<u>k, 'stent')</u> produced from the extraction and	I processing of china clay (kaolin). (Note: Sand and	
Slate wa	old as aggregate from china clay aste sold as aggregate (i.e. in co spoil (minestone) sold as aggre ad 'shale' sold as aggregate (i.e.	egate (i.e. in construction / fill).	page 5).	
GUIDAN	CE NOTES - please read these	e notes before completing the form (Sec	ction 2.2).	
2.2	produced elsewhere within Eng processing please estimate the	land and Wales and brought to the site for	n the quarry or landed at the wharf. <u>Exclude</u> materia processing. Where aggregate is taken to another site. For wharves, <u>exclude</u> material transhipped to	
2.2.3 2.2.6	Including coarse and fine aggre pavers and pipes.		st concrete products e.g. concrete bricks, blocks, tiles	3,
2.2.7 2.2.9 2.2.10 2.2.11 2.2.13/2 .2.14	Total is automatically calculated Building stone includes dimensi Where the product is calcined li used. Tonnage of lime, dolime a and 1.35 for hydrated lime respe	ial; excluding Type 1 and 2 sub-base. I if the form is completed electronically. on, ornamental, monumental and garden s mestone or dolomite (lime / dolime) please and hydrated lime can be recalculated to c ectively.	stone. e report figure expressed as tonnage of original mater arbonate by multiplying by 1.78 for lime, 2.16 for dolin cals, fillers, FGD, powders, glassmaking and animal	me
2.2.16	feed.	I if the form is completed electronically.	J	
2.2.10	Total is automatically calculated	The form is completed electronically.	Tannaa	
2.2.1	Crushed rock for manufacturing asphalt on site i.e. coated (excluding weight of binder)		Tonnes	
2.2.2	Crushed rock for manufacturing asphalt off site (including third party operations)			
2.2.3	Uncoated roadstone (Type 1 and 2 materials)			
2.2.4	Uncoated roadstone (surface dressing chippings)			
2.2.5	Rail ballast			
2.2.6	For concrete aggregate including third party operations on or off site			
2.2.7	Other screened and graded aggregates			
2.2.8	Armourstone and gabion stone			
2.2.9	Other constructional uses, including fill			
2.2.10	Total for aggregate use			

# 2.2.11 Non-aggregate uses Tonnes 2.2.11 Building stone (excluding reconstituted stone) 2.2.12 Cement manufacture 2.2.13 Flux in iron and steel manufacture

# 2.2.17 Landings of crushed rock aggregate from OUTSIDE England and Wales (<u>wharves only</u>)

# **GUIDANCE NOTES**

2.2.15

2.2.16

2.2.14 All other industrial uses

and horticulture

Agricultural use on the land

Total for all non-aggregate

Please provide the relative proportion of total sales for <u>aggregate use</u> originating from each country.

Country of origin	Landings of aggregate (percent)
Scotland	%
Northern Ireland	%
Republic of Ireland	%
France	%
Norway	%
Other countries	%
Unknown	%
Total (should be 100%	(a)

#### 3. SALES BY DESTINATION

From quarries; marine dredged landings; and aggregates landed from outside England and Wales

Sales by Destination for **Aggregate Use** only

If more than one mineral type at a site, please print an extra copy of Questions 2 and 3, for each, and attach onto back of form.

## **GUIDANCE NOTES**

This information is **very** important for calculating inter-regional / sub-regional flows and consumption of aggregates. It is appreciated that sales destination will not always be known particularly for **collected** sales. For collect sales where the destination is not known please allocate to the sub-region where the quarry / wharf is located. **Please make estimates wherever possible.** 

Please indicate whether the destination is final by recording y (yes), n (no) or ? (unknown) in the final destination (**FD**) box.

Estimate **for** <u>aggregate sales</u> **only** the quantities delivered to initial destinations (sub-region), including those value-added sites (such as asphalt, ready-mix and precast concrete plants), during 2023 by **transport method** and **area** for aggregates excavated and / or sold from the site. **Do not include sales for non-aggregate uses.** 

**Principal Mode(s) of Transport** - An estimate by % (which totals to 100% across road, rail and water).

For a map of the Counties and Unitary Authorities comprising each Sub-Region please see map below (page 11).

<sup>(1)</sup> Where all deliveries are by road just		То	nnes		Percent of total		<u></u>
	-	Sales of	Sales of aggregate		Modes of transport		
Sub-Region	FD	Sand and	Crushed rock	Road <sup>(1)</sup>	Rail	Water	1
Bedfordshire (Central Bedfordshire, Bedford and Luton)		gravel					
Cambridgeshire and Peterborough							
Essex, Southend-on-Sea and Thurrock							East
Hertfordshire							East of England
Norfolk							gland
Suffolk							
Unknown but somewhere in the East of England							
Derbyshire and Peak District National Park							
Leicestershire and Rutland							
Lincolnshire							East Mid
Northamptonshire							idlands
Nottinghamshire							S
Unknown but somewhere in the East Midlands							
East London							1
West London							London
Unknown but somewhere in Greater London							n
Durham							
Northumberland and the National Park							N <sub>C</sub>
Tees Valley							North East
Tyne and Wear							ıst
Unknown but somewhere in the North East							
Cheshire West and Chester							
Cheshire East							
Cumberland and part of the Lake District National Park							No
Westmorland & Furness and part of the Lake District National Park							orth West
Greater Manchester, Merseyside, Halton & Warrington							'est
Lancashire, Blackpool and Blackburn with Darwen							
Unknown but somewhere in the North West						ONTINUED OVE	

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## 3. SALES BY DESTINATION (continued...)

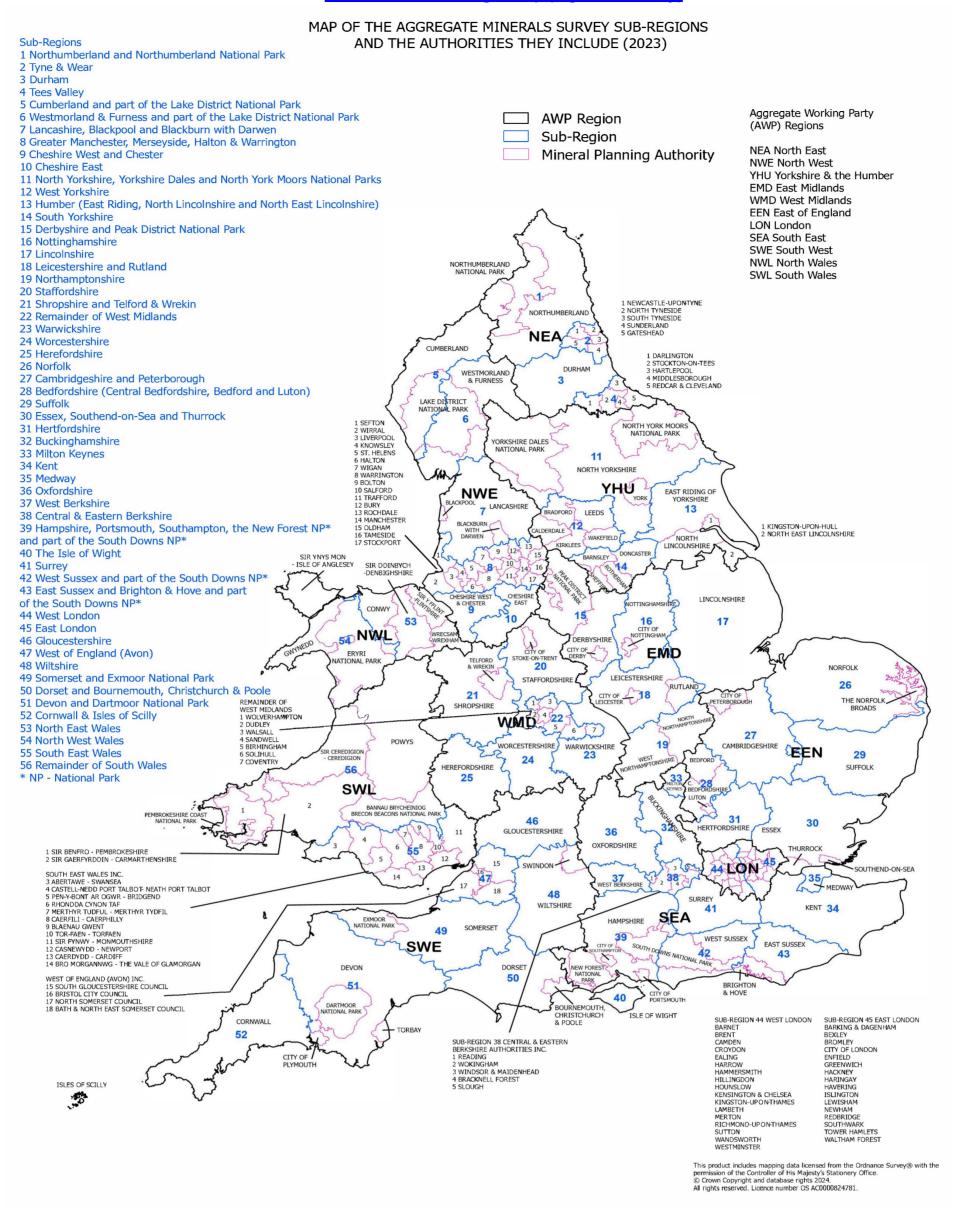
		То	nnes		Percent of total		
		Sales of	aggregate	ı	Modes of transpo	rt	1
Sub-Region	FD	Sand and gravel	Crushed rock	Road <sup>(1)</sup>	Rail	Water	
Buckinghamshire							
Central and Eastern Berkshire Authorities							
East Sussex and Brighton & Hove and part of South Downs NP							
Hampshire, Portsmouth, Southampton, New Forest NP and part of South Downs NP							
Isle of Wight							
Kent							Sot
Medway							South East
Milton Keynes							<u> </u>
Oxfordshire							
Surrey							
West Bekshire							
West Sussex and part of South Downs National Park							
Unknown but somewhere in the South East							
West Of England (Avon)							
Cornwall and Isles of Scilly							
Devon, Plymouth, Torbay and Dartmoor National Park							
Dorset and Bournemouth, Christchurch & Poole							South
Gloucestershire							South West
Somerset and Exmoor National Park							
Wiltshire and Swindon							
Unknown but somewhere in the South West							
Herefordshire							
Shropshire and Telford and Wrekin							
Staffordshire							Wes
Warwickshire							West Midlands
Worcestershire							spur
Remainder of West Midlands							
Unknown but somewhere in the West Midlands							
Humber (East Riding, North Lincolnshire and North East Lincolnshire) North Yorkshire, Yorkshire Dales and							Yorkshire
North York Moors NPs							re and
South Yorkshire							and the Humber
West Yorkshire Unknown but somewhere in Yorkshire							lumbe
& the Humber					PROVIDE TOTAL		<u> </u>

PLEASE PROVIDE TOTALS OVERLEAF....

3. SALES BY DESTINATION (continued...)

·	Ĺ	Tonnes  Sales of aggregate		Percent of total  Modes of transport			
Sub-Region							1
	FD	Sand and gravel	Crushed rock	Road <sup>(1)</sup>	Rail	Water	
North East Wales							Z O
North West Wales							North Wales
Unknown but somewhere in North Wales							ales
South East Wales							Soi
Remainder of South Wales							South Wales
Unknown but somewhere in South Wales							ales
Scotland							
Northern Ireland							]   <u> </u>
Republic of Ireland							Elsewhere
Mainland Europe							уre
Unknown destination							
Total tonnage (mineral total 3.50 should equal those in either question 2.1.8 or 2.2.10)				·		1	

## Click here to view larger map (digital form only)



## Click here to return to form (digital version only)

# MAP OF THE AGGREGATE MINERALS SURVEY SUB-REGIONS AND THE AUTHORITIES THEY INCLUDE (2023)

