

Tyne and Wear Joint Local Aggregates Assessment

2021 Data

January 2023



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Executive Summary

Local Aggregates Assessment (LAA)

This Local Aggregates Assessment (LAA) has been jointly prepared by Gateshead Council, Newcastle City Council, North Tyneside Council, South Tyneside Council, and Sunderland City Council and covers Tyne and Wear. The LAA is updated on an annual basis and this version has been updated using sales and permitted reserves data from 2021.

The LAA provides an annual assessment of the demand for and supply of aggregates. The LAA contains three main elements:

- A forecast of demand for aggregates;
- An analysis of supply options; and
- An assessment of the balance between supply and demand.

Aggregates in Tyne and Wear

Primary aggregates

Within Tyne and Wear, the geology gives rise to the following aggregate resources:

- **Permian magnesian limestone** – This resource occurs in South Tyneside and Sunderland.
- **Basal Permian sand** – This resource outcrops intermittently along the base of the magnesian limestone escarpment.
- **Sand and gravel (superficial deposits)** – Fluvial, glacial and beach and blown sand deposits are found in Tyne and Wear, including the River Tyne and River Wear valleys.

Permian magnesian limestone and basal Permian sand is currently extracted at Eppleton Quarry in Sunderland and Permian magnesian limestone is also extracted at Marsden Quarry in South Tyneside. Fluvial and glacial sand and gravel has been extracted in Tyne and Wear in the past, most notably in the west of Gateshead Borough, but this resource is not currently extracted in Tyne and Wear.

Marine dredged sand and gravel is landed at wharves on the River Tyne with material supplied from the Humber dredging area off the coast of Yorkshire and Lincolnshire. In 2021 marine sand and gravel was landed at Jarrow Wharf in South Tyneside. Other wharves on the River Tyne were not operational in 2021. The Port of Sunderland also has capacity to land aggregates but marine sand and gravel was not landed in 2021.

Crushed rock is also imported by sea into Tyne and Wear. In 2021 material was supplied via Whitehill Point Wharf in North Tyneside.

Recycled and secondary aggregates

Recycled aggregates are supplied from sites in Tyne and Wear that recycle construction, excavation and demolition wastes. A list of these sites is provided in Appendix 3. There are no sources of secondary aggregates.

Imports of aggregates

Tyne and Wear is a net importer of aggregates. The area is reliant on supply from other areas to meet overall demand, particularly the adjoining areas of County Durham and Northumberland.

Demand

To understand and forecast future demand for aggregates from Tyne and Wear, the starting point has been to use the rolling ten-year sales average and other relevant local information line with the NPPF and the Planning Practice Guidance. In terms of other relevant information consideration has been given to demand from future house building and major infrastructure / construction projects. The LAA has also looked at average sales three-year periods to identify the general trend of demand in comparison to the ten year average.

In terms of major infrastructure and construction projects, a number of future projects have also been identified but as these types of schemes are of a similar types and scale to those that have been delivered during the period of the ten-year sales average it is not anticipated that these will place an increase in demand for aggregates over and above that captured by the sales average figure.

The three-year sales average for 2018, 2019 and 2021 has been used to calculate the LAA annual provision rate. It was considered that this period captures likely future demands from housebuilding and major construction and infrastructure projects. Sales from 2020 have been excluded from the calculation due to the temporary effect of the coronavirus pandemic on sales in 2020. The annual provision rates are:

- Land-won sand and gravel – 250,000 tonnes
- Crushed rock – 526,000 tonnes

Balance between supply and demand

A quantitative assessment of the balance between the quantum of permitted reserves and the calculated demand is set out below. The LAA annual provision rate figure has been extrapolated forward for a period of 15 years to 2036 to understand the impact on demand over time.

Table ES1: Balance between supply and demand

| Resource | Permitted Reserves at 31/12/2021 (thousand tonnes) | Annual Provision Rate (thousand tonnes) | Demand forecast 2022 to 2036 based on the Annual Provision Rate (thousand tonnes) | Landbank (years) | Balance Between Demand and Supply 2022 to 2036 (thousand tonnes) |
|--------------------------|--|---|---|------------------|--|
| Land-won Sand and Gravel | 5,420 ^e | 250 | 4,000 | 21.7 | +1,420 |
| Crushed Rock | 5,260 ^e | 526 | 8,416 | 10.0 | -3,156 |

Notes: e – The reserve figure is a Mineral Planning Authority estimate

Supply

Land-won sand and gravel supply

The assessment of the balance between supply and demand indicates that Tyne and Wear has sufficient permitted reserves of sand and gravel to meet the calculated LAA annual provision rate. Supply is however restricted to a single quarry within Tyne and Wear, which limits the future scale of production to the capacity of that site.

There are no site-specific allocations in current and emerging Local Plans or relevant planning applications are currently pending that make additional provision for the extraction of this material in Tyne and Wear. Local Plans and decisions on planning applications should, in principle, support additional areas for extraction where environmentally acceptable to avoid a reliance on supply from a single site or even the eventual cessation of the extraction of this resource when reserves at Eppleton Quarry are exhausted.

Crushed rock supply

The assessment of the balance between supply and demand indicates that Tyne and Wear does not have sufficient permitted reserves of crushed rock to meet the calculated LAA provision rate over the period to 2036 and the landbank is 10 years, which is at the minimum level required by the NPPF.

It is anticipated that the permitted reserves of crushed rock at Marsden Quarry will be exhausted when the current planning permission for extraction expires in 2027.

Eppleton Quarry would not have sufficient productive capacity to meet the LAA annual provision rate. There are no site-specific allocations in current and emerging Local Plans that could address this shortfall and no relevant planning applications are currently pending.

Without additional provision, Tyne and Wear will not be able to meet the LAA provision rate and there would be an increased reliance on supply from other areas to meet needs within Tyne and Wear. Emerging Local Plans and decisions on planning applications should therefore support additional areas for extraction where suitable resources are identified and proposals would be environmentally acceptable.

Marine sand and gravel

Marine dredged sand and gravel makes an important contribution to the overall provision of aggregates in Tyne and Wear. It is anticipated that supply from these wharves is likely to be maintained. These sites also have the capacity to increase supply in order to increase supply in the future, particularly if the currently mothballed sites are brought back into use.

Recycled and secondary aggregate supply

Recycled aggregates in Tyne and Wear are typically produced from construction, demolition and excavation wastes and road planings. It is anticipated that the supply of recycled and secondary aggregates is likely to continue at similar levels as in recent years, particularly in the short-term.

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Table ES2: Dashboard

| | Sales in 2020 (tonnes) | Sales in 2021 (tonnes) | Ten Year sales average (tonnes) | Three Year Sales average (tonnes) | Trend | LAA Annual Provision Rate (tonnes) | Permitted Reserves 2021 (tonnes) | Landbank (Years) | Comments |
|--------------------------|------------------------|------------------------|---------------------------------|-----------------------------------|-------|------------------------------------|----------------------------------|------------------|--|
| Land Won Sand and Gravel | 203,000+ | 250,000+ | 220,500 | 250,000 | ↔ | 250,000 | 5,701,000 | 21.7 | Supply from a single quarry. Steady sales figures suggest site is working at, or near productive capacity. |
| Crushed Rock | 452,000+ | 525,000+ | 391,100 | 525,667 | ↑ | 526,000 | 5,260,000 | 10.0 | Supply is from two quarries. Three year sales average is above the ten year sales average showing increasing demand. |
| Marine Sand and Gravel | 310,000+ | 350,000+ | 319,500 | 310,000 | ↑ | | | | Landings are estimated to have steadily risen in recent years. |
| Recycled Aggregates | 297,300 | 359,900 | 375,500 | 324,000 | ↑ | | | | Sales in 2021 have risen compared to sales in 2020. |
| Secondary Aggregates | 0 | 0 | 0 | 0 | ↔ | | | | No sites are known to produce secondary aggregates in Tyne and Wear. |
| Rock Imports by Sea | 100,000+ | 110,000+ | 117,900 | 130,000 | ↔ | | | | Landings have fluctuated in recent years. |

Notes:

+ Mineral Planning Authority estimate

1. Introduction

- 1.1 To plan for a steady and adequate supply of aggregates, the National Planning Policy Framework (NPPF) (July 2021) states that mineral planning authorities should prepare a Local Aggregates Assessment (LAA). The LAA should provide a forecast of demand for aggregates, an analysis of supply options and assess the balance between supply and demand. It is therefore a key evidence base on which to base decisions on the scale and geographical distribution of future aggregates supply in minerals plans.
- 1.2 This LAA covers Tyne and Wear and the five planning authority areas of:
- Gateshead Council;
 - Newcastle City Council;
 - North Tyneside Council;
 - South Tyneside Council; and
 - Sunderland City Council.
- 1.3 It has been prepared by the five minerals planning authorities as part of their ongoing commitment to work collaboratively on cross boundary planning issues.

2. Background and Context

2.1 This section provides background on the information and purposes of the LAA and how the document has been prepared.

What are aggregates?

2.2 Aggregates are defined as being hard, granular materials which are suitable for use either on their own or with the addition of a cement, lime or bituminous binder in construction. They are used for road making, house construction, the manufacture of concrete and as railway ballast as well as other uses.

2.3 Aggregates are classified in three groups dependent upon where they have been sourced from:

- **Primary aggregates** are produced from naturally occurring mineral deposits, extracted specifically for use as aggregates. Most primary aggregates are produced from hard, strong rock formations or from naturally occurring particulate deposits such as sand and gravel.
- **Secondary aggregates** are defined as aggregates obtained as a by-product of industrial processes, or as a by-product of other mining or quarrying operations.
- **Recycled aggregates** arise from various sources including the demolition or construction of buildings and structures; or from asphalt plantings as a result of work to resurface roads. Recycling involves the processing of the waste material so that it can be made into new material for aggregate uses.

What is a Local Aggregates Assessment?

2.4 A Local Aggregate Assessment (LAA) is an annual assessment of the demand for and supply of aggregates in a mineral planning authority's area. Planning Practice guidance advises that it should contain three elements:

- A forecast of the demand for aggregates based on the average of 10 years sales data and other relevant local information;
- An analysis of all aggregate supply options; and
- An assessment of the balance between demand and supply, and the economic and environmental opportunities and constraints that might influence the situation. It should conclude if there is a shortage or a surplus of supply and, if the former, how this is being addressed.

2.5 LAAs should consider all aggregate supply options, including:

- Land-won primary resources;
- Recycled aggregates;
- Secondary aggregates;

- Marine aggregates; and
- Imports into, and exports out of the area.

2.6 It is intended that LAA will provide the evidence base on which decisions could be taken on the scale, and geographical distribution of future aggregates provision.

Approach to the Local Aggregate Assessment

2.7 This LAA covers Tyne and Wear and has been prepared jointly by Gateshead Council, Newcastle City Council, North Tyneside Council, South Tyneside Council and Sunderland City Council as part of an ongoing commitment to work collaboratively on strategic planning issues.

2.8 Previous iterations of the LAA covering Tyne and Wear have been prepared jointly with Durham County Council, Northumberland County Council, and Northumberland National Park Authority but for 2021 separate LAAs have been prepared for Tyne and Wear, County Durham and Northumberland respectively.

2.9 Given the close relationship between Tyne and Wear and supply from County Durham and Northumberland, the relevant authorities have liaised during the preparation of this LAA to understand the cross boundary planning issues in accordance with the 'Duty to Cooperate' as set out in Section 110 of the Localism Act.

Overview of the data used to inform the LAA

- 2.10 In accordance with the guidance on the preparation of LAAs, a wide range of data has been used to inform the preparation of this report, including:
- The annual aggregates survey of operators undertaken by the North East England Aggregates Working Party and the Mineral Planning Authorities (the findings of which are published in the Annual Reports produced by the Aggregates Working Party);
 - The national Aggregate Minerals Survey for England and Wales on sales, movement, consumption and permitted reserves of aggregate minerals normally undertaken every four years;
 - Relevant information from planning application documentation (including information on production capacity and reserves);
 - Data on landings of marine dredged sand and gravel published by The Crown Estate;
 - Data and information on mineral resources held by the British Geological Survey and The Crown Estate; and
 - Data derived from the Environment Agency Waste Data Interrogator to estimate waste materials used to produce recycled aggregates.

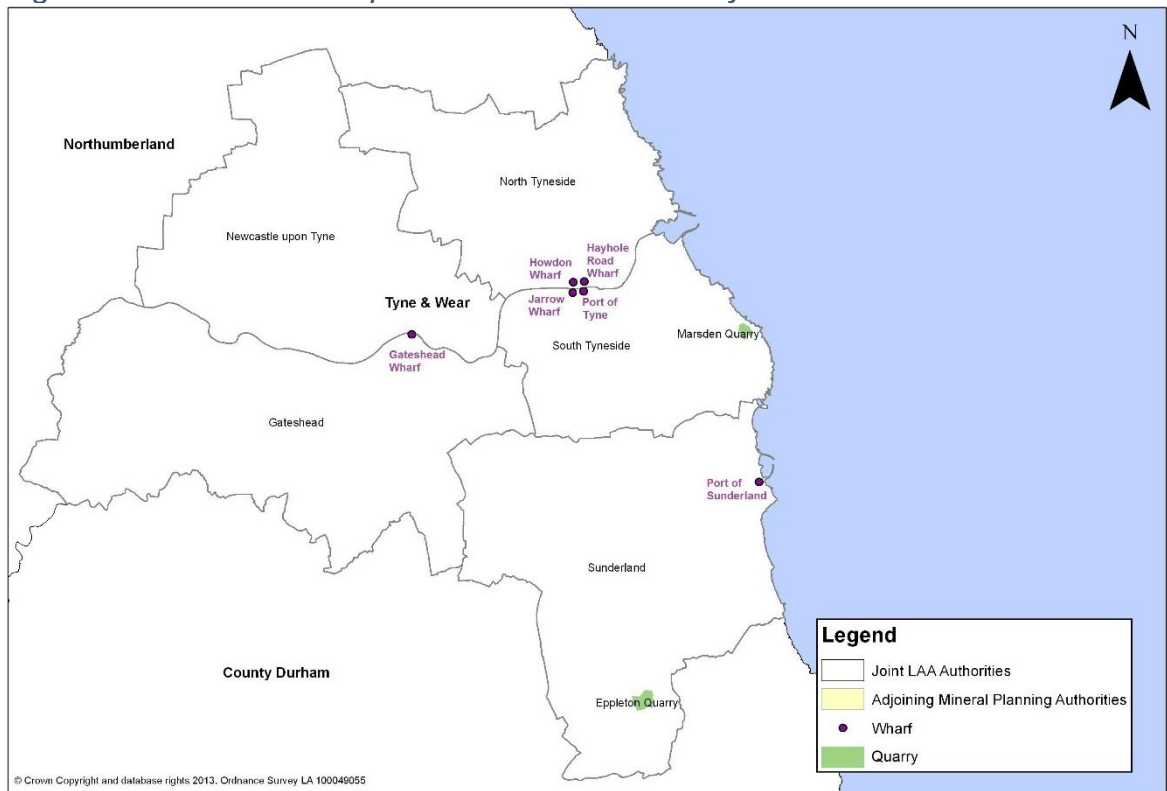
Tyne and Wear

- 2.11 Tyne and Wear is a sub-region of North East England located around the mouths of the rivers Tyne and Wear. It comprises the five metropolitan boroughs of Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland. It is bordered to the north by Northumberland and to the south by County Durham.
- 2.12 The area is largely urban in nature, consisting of the Tyneside and Wearside conurbations. Tyne and Wear covers an area of 538 square kilometres and in 2021 the estimated population was 1.136 million.

Aggregate resources in Tyne and Wear

- 2.13 The geology of Tyne and Wear gives rise to the following aggregate resources:
- Permian magnesian limestone; and
 - Sand and gravel (fluvial, glacial and basal Permian sand).
- 2.14 Figure 1 shows the five boroughs within Tyne and Wear along with the locations of the current quarries and wharves. The geology of Tyne and Wear can be seen on the Mineral Resource Map for Northumberland and Tyne and Wear which was produced by the British Geological Survey which can be downloaded at <http://www.bgs.ac.uk/downloads/start.cfm?id=2578>.

Figure 1: Location of the quarries and wharves in Tyne and Wear



Rock resources

- 2.15 Dolomites, dolomitic limestones and limestones of Permian age (the magnesian limestone) naturally occur in Sunderland and South Tyneside with a small area within North Tyneside. These rocks which have a complex geology, mineralogy and chemistry form the northernmost narrow part of a narrow, easterly dipping outcrop which extends from South Tyneside to Nottingham.
- 2.16 The magnesian limestone is traditionally divided into three formations (Upper, Middle and Lower). It is highly variable in its physical, chemical and mechanical properties and thus its suitability for particular uses. In South Tyneside all formations from the magnesian limestone are capable of producing aggregates suitable for sub-base roadstone and fill. In Sunderland Eppleton Quarry works the lower magnesian limestone (Raisby formation) and underlying Permian basal sands. Towards the top of the sequence, the better quality Upper Magnesian Limestone (concretionary limestone) is worked at Marsden Quarry in South Tyneside. This is a relatively hard, crystalline limestone and is capable of producing higher grades of aggregate materials suitable for roadbase usage or even concreting aggregates.

Sand and gravel resources

- 2.17 Tyne and Wear contains deposits of fluvial, glacial sand and gravel laid down in the last two million years and bedrock deposits in the form of the Basal Permian Sands. The variability of the fluvial and glacial deposits together with their potential concealment within or beneath glacial till means that it is difficult to infer the location and likely extent of potentially workable deposits. However, within Tyne and Wear, the majority of the fluvial deposits lie on the River Tyne within Gateshead. Similarly, the majority of glacial deposits also lie within Gateshead, with lesser areas in both South Tyneside and in Newcastle. Reflecting the overall distribution of fluvial and glacial sand and gravel deposits, past working within Tyne and Wear has been concentrated within Gateshead. The basal Permian sands outcrop intermittently along the base of the magnesian limestone escarpment and dip to the east beneath the limestone and is worked with overlying magnesian limestone aggregate at Eppleton Quarry.

Wharves (for the importation of marine aggregates)

- 2.18 Port facilities along the River Tyne and at Sunderland have the ability to be used to land marine dredged sand and gravel. Currently only Jarrow Wharf in South Tyneside is operational. Wharves at Gateshead and Howdon are not currently active and bulk facilities at the Port of Tyne and Port of Sunderland can be used to land these materials.

- 2.19 There are currently no areas licenced for the dredging of marine aggregates off the coast of North East England, with the closest area being the Humber dredging areas off the coast of Yorkshire and Lincolnshire.

Recycled aggregates

- 2.20 Recycled aggregates are produced at a number of sites in Tyne and Wear and are typically produced from construction, demolition and excavation wastes and spent road planings. These sites are listed in Appendix 3. Recycled aggregates are typically used for lower grade uses such as fill.

Mineral processing infrastructure

- 2.21 Within Tyne and Wear there are a number of concrete plants and asphalt coating plants that have an important role in the supply of mineral products and which utilise aggregates. These sites are listed in Appendix 4.

3. Supply and demand pressures

- 3.1 The NPPF states that mineral planning authorities should plan for a steady and adequate supply of aggregates by preparing a LAA based on a rolling average of 10 years sales data plus other relevant local information. This could include demand from future housebuilding rates as well as demand from large construction and infrastructure projects. There is also a need to consider resource availability and other supply options in identifying the relevant level of provision.
- 3.2 This section sets out an analysis of the information that could influence demand and whether housing numbers and large infrastructure projects are consistent with past trends. It is considered that the regional level is most appropriate for consideration of these projects. This section also looks at external factors that may have constricted supply in previous years.

Housebuilding

- 3.3 A comparison between housing completions in North East England and sales of primary aggregates from quarries and wharves is shown in Figure 2. The strong correlation illustrates the linear relationship between housing completions and primary aggregate sales in the region.

Figure 2: Comparison between housing completion rates, future housing requirement and primary aggregates sales in North East England



- 3.4 It should be recognised that aggregate sales reflect wider demands than house building alone as it is estimated that the construction of new housing

makes up around 25% of construction output by value¹. However it is considered that house building does provide a useful proxy of overall demand and potential changes in demand. This is partly due to the fact house building will impact on demand for associated infrastructure and can provide an indication of wider growth.

3.5 Table 1 below provides a summary of figures on estimated future house building requirements in adopted and emerging Local Plans. To date, data on net annual completions from 2021/22 have yet to be released. At this stage, it is assumed that housing completions will be broadly similar to previous years. Should this assumption turn out to be incorrect then the LAA process and conclusions will be reviewed.

Table 1: Comparison between local assessment of housing need and housing completions 2019/20 to 2021/22

| Sub region | Local Planning Authority | Current local assessment of housing need in adopted and emerging Local Plans (see note) | Net Annual Completions 2019/20 | Net Annual Completions 2020/21 |
|----------------|-------------------------------|---|--------------------------------|--------------------------------|
| Durham | Durham County Council | 1,30 | 1,628 | 1,328 |
| Northumberland | Northumberland County Council | 885 | 1,690 | 1,350 |
| Tyne and Wear | Newcastle | 1,500 | 810 | 1,130 |
| | Gateshead | | 300 | 310 |
| | Sunderland | 745 | 570 | 610 |
| | South Tyneside | 321 | 190 | 170 |
| | North Tyneside | 790 | 490 | 370 |
| | Tyne and Wear total | 3,385 | 2,360 | 2,590 |
| Tees Valley | Hartlepool | 410 | 170 | 160 |
| | Middlesbrough | 410 | 510 | 350 |
| | Stockton on Tees | 655 | 990 | 590 |
| | Darlington | 492 | 450 | 490 |
| | Redcar and Cleveland | 234 | 350 | 350 |
| | Tees Valley total | 2,201 | 2,470 | 1,940 |

Notes:

Housing figures sourced from the following adopted and emerging Local Plans:

- County Durham Plan (Adopted October 2020)
- Northumberland Local Plan (Adopted March 2022)
- Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne (Adopted 2015)
- North Tyneside Local Plan (Adopted 2017)
- South Tyneside Draft Local Plan (2022)
- Sunderland Core Strategy and Development Plan (Adopted 2020)
- Darlington Local Plan (Adopted February 2022)
- Hartlepool Borough Local Plan (Adopted 2018)
- Middlesbrough Housing Local Plan (Adopted 2014)
- Redcar and Cleveland Local Plan (Adopted 2018)
- Stockton-on-Tees Borough Local Plan (Adopted 2019)

¹ Source: Office for National Statistics

Major Infrastructure/Construction Projects

- 3.6 Appendix 1 provides details of past major infrastructure and construction projects, both within Tyne and Wear and in adjoining areas as well as future planned projects.
- 3.7 Information on the aggregates required for many of these projects is not readily available which means that resulting demand for aggregate minerals cannot be clearly quantified. Those projects that have taken place in recent years have contributed to overall sales of aggregate minerals from quarries and wharves in Tyne and Wear. It is considered that any additional demand for aggregates from the future projects identified are unlikely to create significant additional demand for aggregate minerals over and above the levels captured in sales figures recorded in previous years. This is because the future projects are of a similar nature to those taking place in recent years and which would have been captured in the sales figures. However it is considered that there could be local implications from major infrastructure projects, such as converting the A1 to dual carriageway in Northumberland which could place additional demand on sites in the north of the county, or the upgrading of the A66 in North Yorkshire, County Durham and Cumbria.

Impact of the Coronavirus pandemic

- 3.8 As a consequence of the restrictions to control spread of coronavirus, the vast majority of construction sites were temporarily closed for a period from mid-March 2020. The majority of the active sites producing aggregates were also temporarily closed during this time. Sales levels of both crushed rock and sand and gravel fell by between 10 and 16% across nearly all local authorities during this period, likely as a result of these restrictions.
- 3.9 Coronavirus restrictions continued sporadically throughout 2021, however these became progressively less restrictive on both aggregate producers and the construction industry. Sales levels of crushed rock and sand and gravel are higher than in 2020 across all local authorities and have generally returned to levels that are consistent with years prior to the pandemic. It is possible that some sales levels are artificially higher as they incorporate a percentage of 'pent-up' demand from 2020. However given that many sites are limited by their productive capacity it is not considered that this effect will have significantly altered sales levels.
- 3.10 In this context, it is considered that 2020 is not representative of demand for aggregates which would have otherwise occurred and therefore should not be included in calculations for forecasting future demand. The effect of coronavirus restrictions on sales figures for 2021 is not considered as profound, therefore it is appropriate to include figures for this year in future predictions.

4. Recycled and Secondary Aggregates

- 4.1 Recycled and secondary aggregates make an important role to the total supply of construction aggregates. The use of these types of aggregates has both environmental and economic benefits by providing for the more sustainable use of resources by maximising the re-use of materials, minimising extraction of virgin materials and diverting waste from landfill.

Recycled aggregates

- 4.2 In Tyne and Wear, recycled aggregates are typically derived from construction, demolition and excavation wastes that have been reprocessed to provide materials suitable for aggregate uses. They include materials such as stone, concrete, brick and asphalt planings.
- 4.3 Information on the production of recycled aggregates is not as comprehensive or robust as the information available on the production of primary aggregates. Information is derived from surveys of fixed sites producing recycled aggregates. The return rates to these voluntary surveys are generally poor. Where survey data is missing for sites, the Environment Agency's Waste Data Interrogator has been used to derive estimates for those sites that have not provided a survey return. The method using the Waste Data Interrogator progressively filters out types of waste that cannot be used for recycled aggregates, leaving waste which is classified as either 'Concrete, bricks, tiles and ceramics', 'Bituminous mixtures' or 'Other construction and demolition wastes'.
- 4.4 The survey data and the data derived from the Waste Data Interrogator does not take into account mobile crushers and screens which operate outside of fixed site (e.g. at demolition sites). These are thought to make an important contribution to overall supply of recycled aggregates.
- 4.5 Table 2 shows the sales of recycled aggregates in Tyne and Wear between 2019 and 2021. Overall, sales of recycled aggregates rose by approximately 21% across Tyne and Wear. The available data suggests that recycled aggregates will continue to make an important contribution to the supply of aggregates within Tyne and Wear.

Table 2: Estimated sales of recycled aggregates in Tyne and Wear, 2019 to 2021

| Year | Sales of recycled aggregates (thousand tonnes) |
|--|---|
| 2019 | 314.9 |
| 2020 | 297.3 |
| 2021 | 359.9 |
| <i>Three year average (2019 to 2021)</i> | <i>324.0</i> |

Source: Survey data and data derived from the Environment Agency Waste Data Interrogator.

Secondary aggregates

- 4.6 Secondary aggregates are usually by-products of other construction or industrial processes such as the production of furnace bottom ash. There are currently no sites producing secondary aggregates in Tyne and Wear.

5. Sand and Gravel

- 5.1 This section sets out known information about sales and permitted reserves of sand and gravel within Tyne and Wear as well as imports, exports and consumption of aggregates.
- 5.2 After consideration of these issues, this section also calculates future demand, the recommended annual provision rate and the supply options to meet the annual provision rate.

Land-won sand and gravel

- 5.3 Information on sales of land won sand and gravel for aggregate use from quarries within Tyne and Wear is provided below in Table 3. As there is currently one active site, Mineral Planning Authority estimates are shown as the sales data provided from the survey operators cannot be shown here for reasons of commercial confidentiality. Total sales were estimated to be 250,000 tonnes. This is broadly consistent with sales level since 2014.

Table 3: Sales of land-won and sand gravel from Tyne and Wear, 2012 to 2021

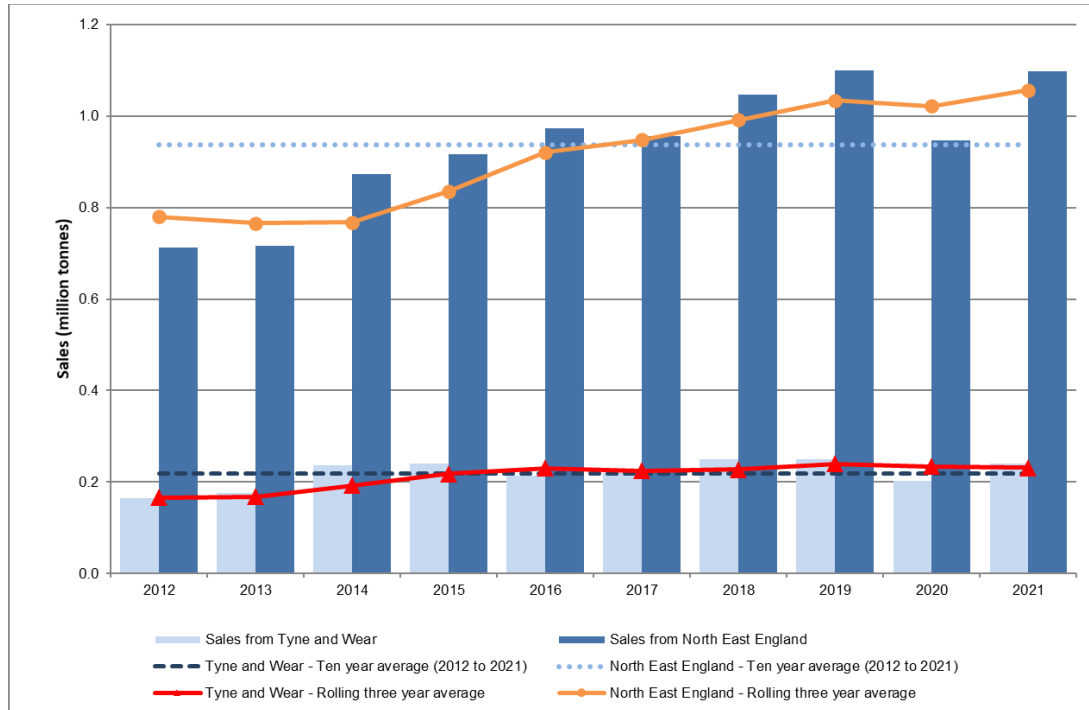
| Year | Sand and gravel sales (thousand tonnes) |
|--|--|
| 2012 | 165+ |
| 2013 | 177+ |
| 2014 | 236+ |
| 2015 | 240+ |
| 2016 | 214+ |
| 2017 | 220+ |
| 2018 | 250+ |
| 2019 | 250+ |
| 2020 | 203+ |
| 2021 | 250+ |
| <i>Ten year sales average (2012 to 2021)</i> | 220.5 |
| <i>Three year sales average (2018 to 2021)</i> | 234.3 |
| <i>Three year sales average 2018-2021 (excluding 2020)</i> | 250.0 |

Notes: + Mineral Planning Authority estimates.

- 5.4 In order to better understand wider trends, Figure 3 shows the ten year sales average and the rolling three years of sales across Tyne and Wear and North

East England as a whole. The three year sales average has risen steadily since 2014 and has been consistently higher than the ten year sales average for the last six years. In Tyne and Wear, sales have remained fairly consistent since 2014, reflecting sales at Eppleton Quarry rising to maximum production.

Figure 3: Comparison of land won sand and gravel sales and the sales averages from Tyne and Wear and North East England



Marine sand and gravel

- 5.5 Within Tyne and Wear there are a number of wharves where marine dredged sand and gravel is landed and sold for aggregate uses. In 2021, material was landed at Port of Tyne and Jarrow Wharf both in South Tyneside. Other sites that have historically landed sand and gravel – such as Gateshead Wharf and Howdon Wharf – were inactive in 2021. No material was landed at the Port of Sunderland.
- 5.6 Table 4 shows data on landings of marine sand and gravel at the wharves in Tyne and Wear. The sales from Tees Valley derived from the annual survey of operators cannot be published in the AWP annual reports or this LAA because it would lead to the disclosure commercially sensitive sales data for the small number of operational sites in Tyne and Wear. The figures shown in Table 4 have been derived from The Crown Estate landing statistics which include a figure on landing at wharves on the River Tyne. This information is considered to provide a robust basis of estimating sales of this resources from wharves in Tyne and Wear.

Table 4: Landings of marine sand and gravel from wharves in Tyne and Wear 2012 to 2021 (thousand tonnes)

| Year | Landings* (thousand tonnes) |
|--|--------------------------------|
| 2012 | 337,173 |
| 2013 | 265,293 |
| 2014 | 292,646 |
| 2015 | 287,018 |
| 2016 | 312,469 |
| 2017 | 296,624 |
| 2018 | 288,992 |
| 2019 | 258,081 |
| 2020 | 268,555 |
| 2021 | 318,057 |
| Ten-year average 2012 to 2021 | 292,491 |
| Three-year average 2019 to 2021 | 281,564 |

Notes: * Figures are landings of marine dredged sand and gravel provided in the annual statistics on the dredging and landing of these materials published by The Crown Estates. The actual sales data from the annual surveys is commercially confidential.

Imports and exports

- 5.7 The most up-to-date information on imports and exports of primary aggregate minerals is provided from the results of the 2019 national aggregate minerals survey undertaken by British Geological Survey on behalf of the Department for Communities and Local Government and the Welsh Government.
- 5.8 This information has been used to understand the consumption of different areas. Table 5 shows consumption for Tyne and Wear. This shows that the sub-region is a net importer of sand and gravel material. Tables 6 and 7 explore some of the inter-regional movements in more detail.

Table 5: Comparison of sales and consumption of land won and marine sand and gravel for Tyne and Wear (thousand tonnes)

| Sales | Imports | Exports | Total consumption |
|-------|---------|---------|-------------------|
| 533 | 300 | 268 | 565 |

Source: Table 3 Summary of exports and imports of sand and gravel (including marine sand and gravel) in 2019: North East. Table 5i Consumption of primary aggregates by region in 2019: North East. Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales.

Exports

- 5.9 Table 6 shows the sales of sand and gravel from quarries and wharves in Tyne and Wear and the principal destinations of these sales. For land-won sand and gravel, sales to the rest of North East England were roughly the same as those recorded internally whilst the highest percentage of sales was recorded to other regions. The vast majority of these sales (88%) were recorded in Yorkshire and Humber. Of the remainder, 10% were recorded in the East Midlands and 2% in the North-West. A much higher proportion of sales of marine sand and gravel were recorded within Tyne and Wear with the majority of the remainder being sold elsewhere within North East England.

Table 6: Sales of sand and gravel from Tyne and Wear and principal destination sub-region, 2019

| Destination | Land won sand and gravel (thousand tonnes) | MPA % | Marine sand and gravel (thousand tonnes) | MPA % |
|--------------------|---|--------------|---|--------------|
| Tyne and Wear | 75 | 30% | 189 | 67% |
| North East | 70 | 28% | 91 | 32% |
| Elsewhere | 105 | 42% | 2 | 1% |
| Total | 250 | | 283 | |

Source: Table 9i Sales of primary aggregates by MPA and principal destination sub-region in 2019: North East. Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales.

Imports

- 5.10 Table 7 categorises the percentage of overall consumption that is received from source MPAs and identified as being consumed in Tyne and Wear. Marine dredged material landed in South Tyneside (30% to 40% of consumption) and quarried material from Sunderland (10% to 20% of consumption) make an important contribution to Tyne and Wear supply. However, a significant level of supply is also recorded from the adjoining areas of County Durham and Northumberland, with smaller amounts recorded from Cumbria and North Yorkshire.

Table 7: Consumption of sand and gravel for aggregate use in 2019 identifying for Tyne and Wear the principal supplying MPAs

| Source region | Source MPA | Percentage of Tyne and Wear consumption |
|-------------------------------------|--------------------------------|---|
| North East England | Durham County Council | 10-20% |
| | Northumberland County Council | 20-30% |
| | South Tyneside Council | 30-40% |
| | Sunderland City Council | 10-20% |
| Yorkshire and the Humber | North Yorkshire County Council | 1-10% |
| North West England | Cumbria County Council | 1-10% |
| Total consumption (thousand tonnes) | | 565 |

Source: Table 9i Sales of primary aggregates by MPA and principal destination sub-region in 2019: North East. Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales.

Calculation of demand

- 5.11 The NPPF states that mineral planning authorities should plan for a steady and adequate supply of aggregates by preparing a LAA based on a rolling average of 10 years sales data plus other relevant local information. The local situation has been discussed in previous chapters and the calculation of future demand for sand and gravel is based on the following assumptions:
- Levels of housebuilding will be broadly consistent with past rates across Tyne and Wear, as discussed in Chapter 3;
 - Demand for aggregates from large infrastructure projects will be broadly similar to previous projects, or at least not significantly higher as discussed in Chapter 3;
 - Sales figures from 2020 are not representative due to the impact of the pandemic as discussed in Chapter 3 and should not be included in calculation of a three-year sales average;
 - Recycled aggregates will continue to make an important contribution to overall supply as discussed in Chapter 4;
 - Marine sand and gravel will also continue to make an important contribution to overall supply as discussed in Chapter 5; and
 - Levels of imports and exports of sand and gravel will remain broadly consistent with data recorded in 2019.

Sales data

- 5.12 Table 8 provides a summary of sales of sand and gravel within Tyne and Wear for the period 2002 to 2021 respectively. The tables also provide a summary of the following:

- 10-year sales average (2012 to 2021) - To understand past supply and provide the basis of forecasting future demand in line with the NPPF.
 - 3-year sales average (2019 to 2021) - To understand the general trend of demand in comparison to the 10-year average as part of the consideration of whether it might be appropriate to increase supply as advised by the Planning Practice Guidance.
 - 3-year sales average (2018 to 2021, excluding 2020) - To understand the general trend of demand in comparison to the 10-year average but excluding sales from 2020 which were affected by restrictions to control the coronavirus pandemic.
 - 20-year sales average (2002 to 2021) - To understand trends over a longer period of time, including sales prior to the economic downturn after 2008.
- 5.13 As discussed before, sales in 2020 will have been affected by the impact of the pandemic both through restrictions affecting production at sites (supply) and restrictions affecting construction sites using aggregates (demand). For this reason it is thought most appropriate to discount 2020 sales figures from the calculation of the three years sales average, as this is unlikely to be representative of a typical year of sales. It is still considered appropriate to include the year 2020 in calculations of the 10-year and 20-year averages as these cover a longer period and therefore conditions which are unrepresentative make less of an impact to this calculation.
- 5.14 A comparison of the ten-year sales average (2012 to 2021) with the three-year sales average discounting 2020 (2018 to 2021) in Figure 3 shows that the three-year average for sales of sand and gravel is 15% higher for Tyne and Wear when combined with neighbouring sub-regions. This reflects that the ten-year period includes a number of years of depressed sales (particularly 2012 to 2014) as a result of the economic downturn during part of the period covered. In comparison the three-year sales average includes a period (2018 to 2021, excluding 2020) where sales have increased as a result of increased demand thus indicating a trend of increased sales in recent years over and above those levels experienced during the economic downturn.
- 5.15 The information also shows that the joint highest annual sales over the previous ten-year monitoring period were in 2021. Prior to this ten-year period, sales of sand and gravel last exceeded these sales levels in 2006. The sales prior to 2008 are generally of a different magnitude to sales after 2008 and reflect the buoyancy and growth in the economy in the early 2000s.
- 5.16 It is therefore considered that the three-year sales average would provide a more appropriate basis of identifying demand compared to the ten-year sales average and an average over a longer time frame. This is because the ten-year period includes a period of depressed sales as a result of the economic downturn whereas the three-year period reflects a period of increased

construction activity. The three-year average also would reflect more current trends in the economy. As the three-year sales average is higher than the ten-year average, using the three-year sales average as a the basis for identifying demand would in effect represent an uplift over and above the ten year sales average.

- 5.17 Using sales over a longer period, such as a twenty-year period between 2002 and 2021 is also not deemed to be appropriate because it includes a period when the magnitude of sales were different. There have also been innovations that have reduced the quantities of virgin materials required in some products and applications.

Table 8: Land-won sand and gravel sales and sales average information

| Year | Land-won sand and gravel sales (thousand tonnes) |
|---|---|
| 2002 | 215 |
| 2003 | 312 |
| 2004 | 282 |
| 2005 | 353 |
| 2006 | 409 |
| 2007 | 241 |
| 2008 | 188 |
| 2009 | 113+ |
| 2010 | 171+ |
| 2011 | 162+ |
| 2012 | 165+ |
| 2013 | 177+ |
| 2014 | 236+ |
| 2015 | 240+ |
| 2016 | 214+ |
| 2017 | 220+ |
| 2018 | 250+ |
| 2019 | 250+ |
| 2020 | 203+ |
| 2021 | 250+ |
| 3 year average (2019 to 2021) | 234.3 |
| 3 year average (2018, 2019 and 2021) | 250.0 |
| 10 year sales average (2012 to 2021) | 220.5 |
| 20 year sales average (2002 to 2021) | 232.6 |

Notes: + Mineral Planning Authority estimate

- 5.18 Table 9 sets out the recommended annual demand requirement of sand and gravel calculated by this iteration of the LAA. The figure in this table will be used to inform the scale of provision in Local Plans and the ongoing monitoring of this. These figures will be revisited each year through the preparation of the LAA to take account of the most up-to-date information on sales and changes to demand based on the local factors identified such as planned house building and major infrastructure and construction projects.

Table 9: Proposed annual demand requirement for land-won sand and gravel based upon the three year sales average (tonnes)

| | |
|---|-----------------------|
| LAA provision for Tyne and Wear (land-won sand and gravel) | 250,000 tonnes |
|---|-----------------------|

Supply options

- 5.19 Sand is currently only supplied from one quarry within Tyne and Wear (Eppleton Quarry in Sunderland). As at 31 December 2021, it is estimated that 5,420,000 tonnes of permitted reserves remain. Based on a recommended annual provision from Tyne and Wear of 250,000 tonnes, this equates to a landbank of permitted reserves of 21.7 years at 31 December 2021.
- 5.20 A quantitative assessment of the balance between supply and demand for the next 15 years is set out below. Demand has been calculated by extrapolating the annual provision calculating in the LAA over the 15 year period. The figures indicate that Tyne and Wear has sufficient permitted reserves of sand and gravel to meet this identified demand over the period to 2036 in overall quantitative terms.

Table 10: Assessment of the balance between supply and demand for sand and gravel from Tyne and Wear

| | | |
|----|---|--------------------|
| a) | Permitted reserves at 31 December 2021 | 5,420,000 tonnes* |
| b) | LAA Annual Provision | 250,000 tonnes |
| c) | Demand forecast 2022 to 2036 b) x 15 years | 4,000,000 tonnes |
| d) | Landbank based on LAA provision a) ÷ b) | 21.7 years |
| e) | Balance between supply and demand (2012 to 2036) a) - c) | + 1,420,000 tonnes |

Note: * Sand and gravel reserve and sales figures are based on Mineral Planning Authority estimates.

- 5.21 While it is recognised that Eppleton Quarry has the productive capacity to meet the required annual provision and has planning permission to extract mineral until 2040, supply is nonetheless restricted to a single site in an area that is a major source of demand. It is, therefore, recommended that Local Plans and decisions on planning applications should, in principle, support additional areas for extraction where environmentally acceptable. This is considered necessary in order to avoid a reliance on supply from a single site,

avoiding limiting the future scale of production to that of Eppleton Quarry or even the eventual cessation of the extraction of this resource from this area as well as helping to ensure that an appropriate contribution to local and wider needs is made.

- 5.22 If additional environmentally acceptable new or extended sand and gravel sites cannot be identified, future demand for sand and gravel from Tyne and Wear will need to be met by a combination of marine dredged aggregates and from sites quarries in adjoining areas such as County Durham and Northumberland, which already make a significant contribution to supply. Until it can be demonstrated that there are no further environmentally acceptable sites remaining in Tyne and Wear further working must be given consideration. Further provision will reduce pressure on permitted reserves in adjoining areas and would benefit the steady and adequate supply of sand and gravel across the Joint LAA area.
- 5.23 In order to ensure the long-term potential for future provision from within Tyne and Wear, the relevant authorities should seek to safeguard economically important sand and gravel resources in their local plans. Furthermore, given the important role that marine dredged sand and gravel plays in supply, existing wharves where material is landed should be safeguarded.

6. Crushed Rock

- 6.1 After consideration of these issues, this section also will forecast future demand to be planned for. Finally, the implications of this level of demand will be analysed with regard to current permitted reserves. This section sets out known information about sales and permitted reserves of crushed rock within Tyne and Wear as well as imports, exports and consumption of aggregates.
- 6.2 After consideration of these issues, this section also calculates future demand, the recommended annual provision rate and the supply options to meet the annual provision rate.

Crushed rock sales

- 6.3 Information on sales of crushed rock for aggregate use from quarries in Tyne and Wear is provided below in Table 11. There are only currently two active quarries in Tyne and Wear, which means the actual sales data collected for surveys of the operators cannot be published here as this would disclose commercially confidential data. The sales figures shown in Table 12 are estimates of the sales based on information provided in planning applications. Total sales were estimated to be 525,000 tonnes in 2021. This is broadly consistent with sales level since 2018.

Table 11: Sales of crushed rock for aggregate uses from quarries in Tyne and Wear, 2012 to 2021

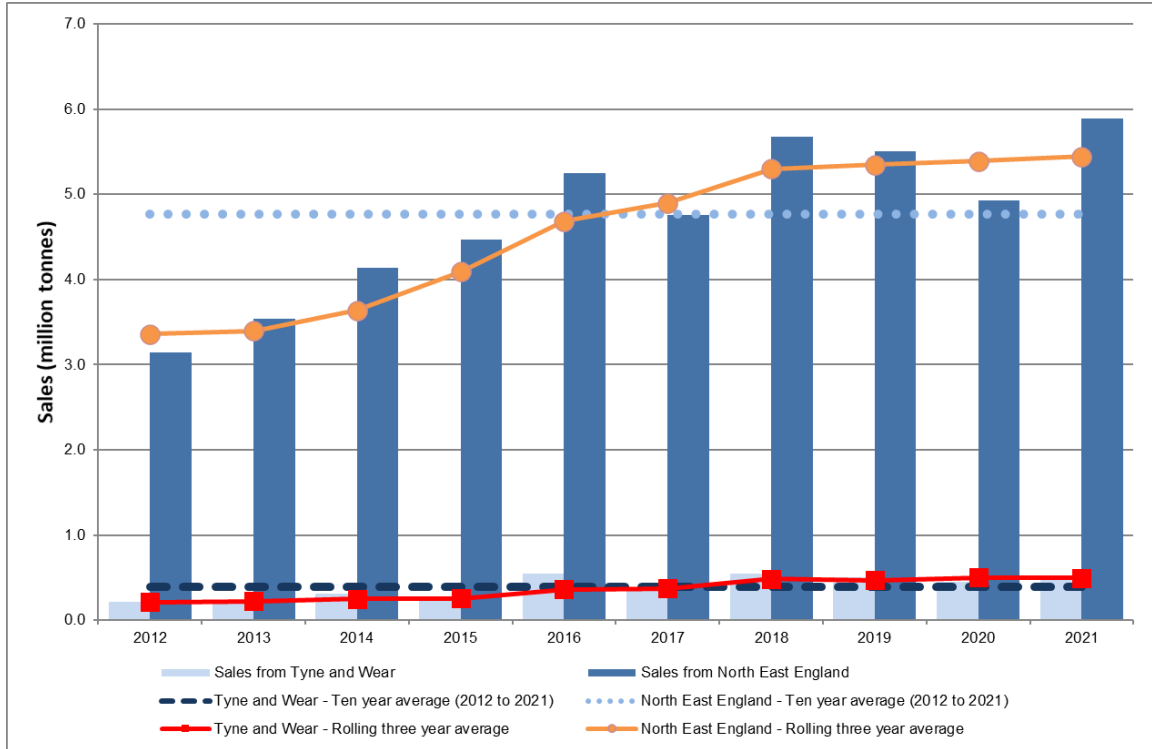
| Year | Sales of crushed rock for aggregate uses (thousand tonnes) |
|---|--|
| 2012 | 212+ |
| 2013 | 236+ |
| 2014 | 309+ |
| 2015 | 225+ |
| 2016 | 550+ |
| 2017 | 350+ |
| 2018 | 550+ |
| 2019 | 502+ |
| 2020 | 452+ |
| 2021 | 525+ |
| Ten year average (2012 to 2021) | 391.1 |
| Three year average (2019 to 2021) | 493.0 |
| Three year average (2018, 2019 and 2021) | 525.7 |

Notes: + Mineral Planning Authority estimate.

- 6.4 In order to examine wider trends, Figure 4 shows trends in the rolling averages for both ten years of sales and three years of sales from Tyne and Wear as well as County Durham and Northumberland. For these sub-regions, the ten years sales average fell steadily between 2012 and 2017, reflecting the period of depressed sales as a result of the economic downturn post 2009. Since 2017 this figure has risen steadily. In contrast, the three year

sales average has risen steadily since 2012 and has been consistently higher than the ten year sales average for the last six years.

Figure 4: Comparison of crushed rock sales and sales average from Tyne and Wear and North East England



Imports and exports of crushed rock

Crushed rock imported by sea

- 6.5 Crushed rock is also known to be supplied to Tyne and Wear through imports by sea. These materials are typically supplied from Norway and Scotland and landed at wharves in Tyne and Wear. Sites where these materials have been landed includes Whitehill Point Wharf (North Tyneside) and Port of Tyne (South Tyneside) on the River Tyne and the Port of Sunderland. Imports to Whitehill Point were recorded in 2021.
- 6.6 Information on sales of crushed rock imported by sea is presented below. Some figures are shown as estimates due to issues with confidentiality. Sales in 2021 were estimated to be roughly 110,000 tonnes. This is generally consistent with previous years, albeit a significant decrease on sales recorded in 2019.

Table 12: Sales of crushed rock from wharves for aggregate use in Tyne and Wear, 2012 to 2021

| Year | Sales (thousand tonnes) |
|---|-------------------------|
| 2012 | 73 |
| 2013 | 70+ |
| 2014 | 100+ |
| 2015 | 100+ |
| 2016 | 246 |
| 2017 | 98 |
| 2018 | 107 |
| 2019 | 175+ |
| 2020 | 100+ |
| 2021 | 110+ |
| Ten year average (2012 to 2021) | 117.9 |
| Three year average (2019 to 2021) | 128.3 |
| Three year average (2018, 2019 and 2021) | 130.0 |

Notes: + Mineral Planning Authority estimates

Imports and consumption

- 6.7 The most up-to-date information on imports and exports of primary aggregate minerals is provided from the results of the 2019 national aggregate minerals survey undertaken by British Geological Survey on behalf of the Department for Communities and Local Government and the Welsh Government.
- 6.8 This information has been used to understand the movements of crushed rock between mineral planning authority areas and the consumption of different areas. Table 13 shows crushed rock consumption for Tyne and Wear and shows that the sub-region is a net importer of crushed rock for aggregate uses. Table 14 explores some of the inter-regional movements in more detail.

Table 13: Comparison of sales and consumption of crushed rock for Tyne and Wear (thousand tonnes)

| Sales | Imports | Exports | Total consumption |
|-------|---------|---------|-------------------|
| 502 | 689 | 0 | 1,191 |

Source: Table 3 Summary of exports and imports of crushed rock (including material landed at wharves) in 2019: North East. Table 5i Consumption of primary aggregates by region in 2019: North East. Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales.

- 6.9 The consumption of crushed rock in Tyne and Wear is shown in Table 14. The table categorises for each destination sub-region the percentage of overall consumption that is received from source MPAs. A significant level of supply is recorded from the adjoining areas of County Durham (20% to 30% of consumption) and Northumberland (30% to 40% of consumption). Notwithstanding this, supply from South Tyneside and Sunderland make an important contribution to supply.

Table 14: Consumption of crushed rock for aggregate use in 2019 and the MPA areas supplying the materials

| Source region | Source MPA | Percentage of Tyne and Wear consumption |
|-------------------------------------|--------------------------------|---|
| North East England | Durham County Council | 20-30% |
| | Northumberland County Council | 30-40% |
| | Northumberland National Park | <1% |
| | Sunderland City Council | 30-40% |
| Yorkshire and the Humber | North Yorkshire County Council | <1% |
| East Midlands | Leicestershire County Council | <1% |
| Elsewhere | Outside England and Wales | 10-20% |
| Total consumption (thousand tonnes) | | 1,037 |

Calculation of demand

- 6.10 As previously discussed, a number of assumptions have been made when considering the future demand for crushed rock, namely:
- Levels of housebuilding will be broadly consistent with past rates across the Tyne and Wear, as discussed in Chapter 4;
 - Demand for aggregates from large infrastructure projects will be broadly similar to previous projects, or at least not significantly higher as discussed in Chapter 3;
 - Sales figures from 2020 are not representative due to the impact of the pandemic as discussed in Chapter 3 and should not be included in calculation of the three year sales average;
 - Recycled aggregates will continue to make an important contribution to overall supply as discussed in Chapter 4;
 - Material landed at wharves will also continue to make an important contribution to overall supply as discussed in Chapter 5; and
 - Levels of imports and exports of crushed rock will remain broadly consistent with data recorded in 2019.

Sales data

- 6.11 Table 15 provides a summary of sales of sand and gravel within Tyne and Wear for the period 2002 to 2021 respectively. The tables also provide a summary of the following:
- 10-year sales average (2012 to 2021) - To understand past supply and provide the basis of forecasting future demand in line with the NPPF.

- 3-year sales average (2019 to 2021) - To understand the general trend of demand in comparison to the 10-year average as part of the consideration of whether it might be appropriate to increase supply as advised by the Planning Practice Guidance.
- 3-year sales average (2018 to 2021, excluding 2020) - To understand the general trend of demand in comparison to the 10-year average but excluding sales from 2020 from the calculation due to the impact of the restrictions to control the coronavirus pandemic.
- 20-year sales average (2002 to 2021) - To understand trends over a longer period of time, including sales prior to the economic downturn after 2008.

6.12 As discussed in Chapter 3, the most appropriate measure to calculate future demand is considered to be the three-year sales average, excluding sales figures from 2020, due to the fact the ten-year sales average includes a period of depressed sales as a result of the last economic downturn whereas the three-year period reflects a period of increased construction activity. The three-year average also reflects more current trends in the economy. As the three-year sales average is higher than the ten-year average, using the three-year sales average as a the basis for identifying demand would in effect represent an uplift over and above the ten year sales average.

Table 15: Crushed rock sales and sales average information, 2002 to 2021

| Year | Sales (thousand tonnes) |
|--|-------------------------|
| 2002 | 288 |
| 2003 | 288 |
| 2004 | 236 |
| 2005 | 184 |
| 2006 | 393 |
| 2007 | 375 |
| 2008 | 375 |
| 2009 | 282+ |
| 2010 | 194+ |
| 2011 | 224+ |
| 2012 | 212+ |
| 2013 | 236+ |
| 2014 | 309+ |
| 2015 | 225+ |
| 2016 | 550+ |
| 2017 | 350+ |
| 2018 | 550+ |
| 2019 | 502+ |
| 2020 | 452+ |
| 2021 | 525+ |
| 3 year sales average (2019 to 2021) | 493.0 |
| 3 year sales average (2018, 2019, 2021) | 525.7 |
| 10 year sales average (2012 to 2021) | 391.1 |
| 20 year sales average (2002 to 2021) | 337.4 |

Notes: + Mineral Planning Authority estimate

- 6.13 Table 16 sets out the recommended annual demand requirement of crushed rock calculated by this iteration of the LAA. These figures will be revisited each year through the preparation of the LAA to take account of the most up-to-date information on sales and changes to demand based on the local factors identified such as planned house building and major infrastructure and construction projects.

Table 16: Proposed annual demand requirement for land-won crushed rock based upon the three year sales average (tonnes)

| | |
|--|-----------------------|
| LAA annual provision for crushed rock | 526,000 tonnes |
|--|-----------------------|

Supply options

- 6.14 As at 31 December 2021 it is estimated that approximately 5,260,000 tonnes of permitted reserves remained to be worked in Tyne and Wear. Based on an annual provision rate in this LAA for Tyne and Wear of 526,000 tonnes, this equates to a landbank of permitted reserves of 10.0 years at 31 December 2021.
- 6.15 A quantitative assessment of the balance between supply and demand is set out below. Demand has been calculated using the recommended provision and in quantitative terms it can be seen that Tyne and Wear does not have sufficient permitted reserves of crushed rock to meet this identified demand over the period to 2036.

Table 17: Assessment of the balance between supply and demand for crushed rock from Tyne and Wear

| | | |
|----|---|-------------------|
| a) | Permitted reserves at 31 December 2021 | 5,260,000 tonnes* |
| b) | LAA Annual Provision | 526,000 tonnes |
| c) | Demand forecast 2022 to 2036 b) x 15 years | 7,890,000 tonnes |
| d) | Landbank based on LAA provision a) ÷ b) | 10.0 years |
| e) | Balance between supply and demand (2022 to 2036) a) - c) | -2,630,000 tonnes |

Note: Crushed rock reserve and sales figures are based on Mineral Planning Authority estimates.

- 6.16 Supply of crushed rock from Tyne and Wear is currently restricted to just two quarries; Eppleton Quarry in Sunderland and Marsden Quarry in South Tyneside. The planning permission for Marsden Quarry in South Tyneside requires extraction to cease by the end of 2027 and it is anticipated that the

permitted reserves at this site will be exhausted this date. After this date there will not be sufficient productive capacity to meet the LAA annual provision. This would mean after 2027 Eppleton Quarry would be the only quarry producing crushed rock for aggregate uses within Tyne and Wear. It has an estimated productive capacity of 250,000 tonnes per annum and has planning permission until 2040.

- 6.17 The adopted and emerging Local Plans for the five authorities in Tyne and Wear do not contain any site allocations that would provide for further provision of crushed rock for aggregate uses to meet this identified shortfall. There are also no relevant planning applications pending that could contribute to meeting this shortfall.
- 6.18 It is, therefore, recommended that Local Plans and in decisions on planning applications in Tyne and Wear should, in principle, support additional areas for extraction where environmentally acceptable. This is considered necessary to address the shortfall as well as avoiding a reliance on supply from a single site, avoiding limiting the future scale of production to that of Eppleton Quarry as well as helping to ensure that an appropriate contribution to local and wider needs is made.
- 6.19 If new or extended quarries that are environmentally acceptable cannot be identified, future demand for crushed rock aggregate from Tyne and Wear will need to be met from alternative sources. Due to geography, this is likely to place additional pressure on resources in the adjoining areas of County Durham and Northumberland. Imports of crushed rock by sea also has the potential to contribute to meeting demands from Tyne and Wear.

7. Conclusions

Land-won sand and gravel supply

- 7.1 There is only one quarry in Tyne and Wear supplying sand and gravel for aggregate uses. While Eppleton Quarry has the productive capacity to meet the required annual provision, supply is restricted to this single site. It is, therefore, recommended that Local Plans and decisions on planning applications should, in principle, support additional areas for extraction where environmentally acceptable to avoid a reliance on supply from a single site, avoiding limiting the future scale of production to that of Eppleton Quarry or even the eventual cessation of the extraction of this resource from this area as well as helping to ensure that an appropriate contribution to local and wider needs is made.

Crushed rock supply

- 7.2 Crushed rock supply from Tyne and Wear is currently restricted to just two quarries, Eppleton Quarry in Sunderland and Marsden Quarry in South Tyneside. In the short-term it is understood that these two quarries will have sufficient productive capacity to meet the annual provision recommended. However, it is anticipated that the permitted reserves at Marsden Quarry will be exhausted by the end of 2027 when the current planning permission for extraction expires. Eppleton Quarry, with an estimated productive capacity of 250,000 tonnes per annum, does not have the productive capacity to meet the provision recommended in this LAA. This will result in a shortfall in supply after 2027.
- 7.3 The relevant Local Plans do not contain any site allocations that would address this shortfall or contribute to future supply from Tyne and Wear. There are also current no planning applications pending that could contribute to supply.
- 7.4 It is therefore recommended that the relevant Local Plans and decisions on any future planning applications should, in principle, support additional areas for extraction where environmentally acceptable to meet the identified shortfall as well as avoiding a reliance on supply from a single site, avoiding limiting the future scale of production and to help ensure that an appropriate contribution to local and wider needs is made. Cooperation is required with other authorities if the shortfall cannot be met from within Tyne and Wear.

Marine sand and gravel supply

- 7.5 Marine dredged sand and gravel landed at wharves on the River Tyne make a significant contribution to the overall provision of aggregates in Tyne and

Wear. It is anticipated that supply from these wharves is likely to be maintained. These sites also have the capacity to increase supply in order to increase supply in the future, particularly if the currently mothballed sites are brought back into use. It is also recognised that there is expected to be an ongoing resource available from the Humber dredging areas.

- 7.6 Given the contribution of marine sand and gravel and crushed rock landed at wharves to the overall provision of sand and gravel for aggregate use in Tyne and Wear, it is important that the existing wharves, including those currently mothballed, continue to be safeguarded in line with national planning policy.

Recycled and secondary aggregate supply

- 7.7 Recycled aggregates in Tyne and Wear are typically produced from construction, demolition and excavation wastes and road planings. It is anticipated that the supply of recycled and secondary aggregates is likely to continue at similar levels as in recent years, particularly in the short-term.

Appendix 1: Infrastructure projects that could have a significant influence on demand for aggregates

Major development projects of note in the North East and surrounding areas - completed project or projects currently being constructed

| Project | Location | Details | Timeframe | Demand for aggregates |
|---------------------------|--------------------------|--|--|--|
| A1 upgrade at Lobley Hill | Gateshead, Tyne and Wear | Upgrade of two junctions to include new parallel road links between the junctions and three lanes in each direction. | Construction commenced in summer 2014 and was completed in summer 2016. | Not known. |
| Morpeth Northern Bypass | Morpeth, Northumberland | 3.8 km of new single carriageway road. | Construction commenced in Spring 2015 and was completed in April 2017. | 216,000 tonnes of primary aggregates were supplied from Barrasford and Howick quarries in Northumberland and 5,000 tonnes of recycled material. In addition, aggregate was used in the concrete supplied to the project. |
| A1 Leeming to Barton | North Yorkshire | 12 mile section of dual carriageway to be replaced with a new three lane motorway. | Construction commenced in 2014 and was completed in 2018. | Quarries in the south of County Durham have contributed to supply for this project. |
| Waverley Line re-opening | Scottish Borders | Re-opening of a 30-mile section of the Waverley Line between Tweedbank and Newcraighall near Edinburgh. | Major construction works commenced in spring 2013 and were completed in summer 2015. | Understood materials supplied from quarries in Scotland. Therefore, unlikely to influence on demand from Joint LAA area. |

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| Project | Location | Details | Timeframe | Demand for aggregates |
|--|---|--|--|--|
| A19 Silverlink Junction Improvements | North Tyneside, Tyne and Wea | Improvements to the A19/A1058 Coast Road junction by upgrading the existing grade separated roundabout to a three level interchange. | Construction commenced in 2016 and was completed in March 2019. | Materials include 4,785m ³ of concrete, 11,042m ³ of sub-base, 1,454m ³ and 10,838 m ³ of bituminous material. |
| A19 Testos and Downhill Junction improvements | South Tyneside, Tyne and Wear | It is planned to raise the A19 above the A184 on a flyover. | Construction commenced in 2019 and was completed in early 2022. | Graded aggregates 140,000 m ³ , asphalt 40,000 m ³ , concrete (in situ) 4,800 tonnes and pre-cast concrete 648 tonnes. |
| International Advanced Manufacturing Park (IAMP) | South Tyneside and Sunderland, Tyne and Wear. | Development of manufacturing site targeting the automotive and advanced low carbon manufacturing sectors on 150 hectares of land to the north of the Nissan car manufacturing plant alongside the A19. | Phase one underway. | Not known |
| A1 Brunton to Scotswood widening | Newcastle, Tyne and Wear | Widening of A1 within existing carriageway to provide three lanes between Brunton and Scotswood. | Commenced March 2020 and completed late 2022. | Not known. |
| A1 Birtley to Coal House Roundabout | Gateshead, Tyne and Wear | Widening of A1 to provide three lane carriageway and replacement of railway bridge. | Construction commenced Summer 2021 and is expected to be completed in 2024/25. | Not known. |
| A19 Norton to Wynyard widening | Stockton on Tees, Tees Valley | Widening of existing dual carriageway to provide three lanes in each direction. | Work commenced in Spring 2020 and was completed in December 2021. | Not known. |

| Project | Location | Details | Timeframe | Demand for aggregates |
|--------------------------|---------------|--|---|-----------------------|
| Jade Enterprise Zone | County Durham | 83ha mixed use development including industrial, storage and distribution uses, retail, housing, leisure and community facilities. | Planning permission granted February 2017. Phase 1 now completed. | Not known. |
| Durham City developments | County Durham | New business district on the current site of County Hall together with new County Hall and other developments on the River Wear at Durham and further expansion of premises for Durham University. | A number of projects underway. | Not known. |

Major development projects of note in the North East region and surrounding areas - Potential future projects or projects yet to commence

| Project | Location | Details | Timeframe | Demand for aggregates |
|-------------------------------------|--|--|--|--|
| A1 dualling in Northumberland | Northumberland | Upgrade 13 miles of existing single carriageway to dual carriageway between Morpeth and Felton and between Alnwick and North Charlton. | Development Consent Order examination period ended in July 2021, with a decision by the Secretary of State now expected in September 2023. Construction could start in 2024. | Not known. Likely to create demand from quarries in the north of Northumberland in particular. |
| A66 dualling | North Yorkshire, County Durham and Cumbria | Upgrade 18 miles of existing single carriageway to dual carriageway between A1(M) at Scotch Corner and M6 at Penrith. | Preferred route consultation in 2021. Development Consent Order was submitted in Spring 2022. Decision expected in 2023. Construction could commence in 2024. | Not known. Likely to create additional demand from quarries in the south of County Durham, including those along the A66 corridor. |
| Teesside Combined Cycle Power Plant | Redcar and Cleveland | Construction of gas fired power station with an output of 1,700 MWe. | Development Order Consent granted 5 April 2019. Construction expected to take three years when begun. | Not known. |

Tyne and Wear Joint Local Aggregates Assessment (2021)

| Project | Location | Details | Timeframe | Demand for aggregates |
|---|----------------------|---|---|---|
| York Potash Harbour Facilities | Redcar and Cleveland | Construction of wharf facilities to handle polyhalite from a planned mine in North Yorkshire. | Consent granted. Construction believed to have commenced. | Not known. |
| Teesside Cluster Carbon Capture and Usage Project | Redcar and Cleveland | Combined cycle gas turbine electricity generating station with output of up to 2,000MW. | Development Consent Order application submitted 2020. | Not known. |
| Forest Par | County Durham | 55 ha expansion of Aycliffe Business Park including new road, energy infrastructure and leisure and community uses. | Start date to be confirmed. | Not known. |
| British Volt Gigafactory | Northumberland | 235ha electric car battery manufacturing site. | Received planning permission July 2021. Start date to be confirmed. | 316,000 tonnes to create the surface for the foundational piles |

Appendix 2: Primary aggregates sites in Tyne and Wear

Quarries with planning permission for crushed rock and sand and gravel extraction in Tyne and Wear

| Mineral Planning Authority | Site name | Location and grid reference | Operator | Mineral | Status in 2021 | Expiry date for extraction |
|----------------------------|-----------------|------------------------------|--------------------------|--|----------------|----------------------------|
| Sunderland | Eppleton Quarry | Hetton le Hole NZ 260 482 | Eppleton Quarry Products | Permian Magnesian limestone and Permian basal sand | Active | 15/10/2040 |
| South Tyneside | Marsden Quarry | Whitburn NZ 406 642 | Owen Pugh | Permian Magnesian limestone | Active | 2027 |

Wharves for the importation of aggregate minerals in Tyne and Wear

| Mineral Planning Authority | Site name | Location and Grid Reference | Operator | Mineral | Status in 2021 | Planning permission end date |
|----------------------------|--|-----------------------------|-------------------------------------|----------------------------------|----------------|------------------------------|
| Gateshead | Gateshead Wharf | Gateshead NZ 306 609 | Tarmac | Sand and gravel | Inactive | Not applicable |
| North Tyneside | Whitehill Point Wharf | North Shields NZ 344 661 | Northumbrian Roads / Stema Shipping | Crushed rock | Active | Not applicable |
| | Howdon Wharf | North Shields NZ 360 482 | Tarmac | Sand and gravel | Inactive | Not applicable |
| South Tyneside | Jarrow Wharf | South Shields NZ 335 657 | CEMEX | Sand and gravel | Active | Not applicable |
| | Port of Tyne (Riverside Quay) | South Shields NZ 350 655 | Aggregate Industries | Crushed rock | Inactive | Not applicable |
| Sunderland | Port of Sunderland (Greenwells Quay Wharf) | Sunderland NZ 409 579 | Northumbrian Roads | Sand and gravel and crushed rock | Inactive | Not applicable |

'Dormant' quarries (as defined in the Environment Act 1995) for sand and gravel extraction in Tyne and Wear

| Mineral Planning Authority | Site name | Location and grid reference | Operator | Mineral | Status in 2021 | Expiry date for extraction |
|-----------------------------------|-----------------------------|------------------------------------|-----------------|-----------------|-----------------------|-----------------------------------|
| Gateshead | Bog Wood | Blaydon NZ 16016 62217 | Not known | Sand and gravel | Dormant | 21/02/2042 |
| Gateshead | Land west of Barlow Lane | Blaydon NZ 14894 61652 | Not known | Sand and gravel | Dormant | 21/02/2042 |

Appendix 3: Recycled aggregates sites in Tyne and Wear

This appendix provides details of the permanent recycled aggregate sites in Tyne and Wear. This does not include mobile facilities at demolition and redevelopment sites that also make a contribution to the production of recycled aggregates.

Recycled aggregates sites in Tyne and Wear

| Site Name | Location | Operator | Address |
|---|---------------------|------------------------------------|--|
| Birtley Depot | Gateshead | Ibstock Brick Ltd | Union Brickworks, Station Lane, Birtley, Chester-le-Street DH12 1AJ |
| Bells Waste Disposal Ltd | Gateshead | Bells Waste Disposal Ltd | 8 Addison Industrial Estate, Blaydon-on-Tyne NE21 4TE |
| M G L Demolition | Newcastle upon Tyne | M G L Demolition Ltd | Newburn Haugh Industrial Estate, Riverside Court, Newcastle upon Tyne NE15 8SG |
| Old Neolith Works | Newcastle upon Tyne | Trojan Skips | Bells Close Industrial Estate, Newcastle upon Tyne NE15 6UF |
| Hadrian Yard Central | North Tyneside | Biffa Waste Services Ltd | Hadrian Yard Central, Potter Street, Wallsend NE28 6TZ |
| North Tyneside Transfer Centre | North Tyneside | Suez Recycling and Recovery NE Ltd | Transfer Station, Wallsend Road, North Shields NE29 7SH |
| Unit 15 The Yard | North Tyneside | N W H Waste Services Ltd | Cowen Road, Tyne and Wear NE21 5TW |
| Marsden Quarry Landfill Site | South Tyneside | O'Brien Aggregate Marden Ltd | Mill Lane, Whitburn, Sunderland SR6 7NG |
| 5b Freezemore Road | Sunderland | Grab and Deliver Ltd | New Herrington Industrial Estate, 5b Freezemore Road, New Hettington, Houghton-le-Spring DH4 7BG |
| Hetton Moor Farm Quarry | Sunderland | J Husband | Hetton-le-Hole, Houghton-le-Spring DH5 0JT |
| Material Recycling Facility – Monument Park | Sunderland | Veolia E S (UK) Ltd | Veolia, Monument Park, Washington NE38 8QU |
| Port of Sunderland | Sunderland | Northumbrian Roads Ltd | Capstan House, Barrack Street, Sunderland SR1 2BU |
| Springwell Quarry | Sunderland | Thompsons of Prudhoe Ltd | Springwell Road, Springwell, Gateshead NE9 7SQ |
| Sunderland Recycling Centre | Sunderland | Biffa Waste Services Ltd | 38 Pallion Way, Sunderland SR4 6SN |
| Thompson Waste Ltd | Sunderland | Thompson Waste Ltd | 9 The Parade, Hendon, Sunderland SR2 8NT |

Appendix 4: Processing infrastructure in Tyne and Wear

This appendix provides details of concrete batching plants and asphalt coating plants in Tyne and Wear where aggregates of used to create final products.

Concrete batching plants in Tyne and Wear

| Planning Authority | Site | Location | Operator |
|--------------------|------------------------------------|---|----------------------|
| Gateshead | Crawcrook | Crawcrook Lane, Ryton, NE40 3UL | Breedon |
| | Derwenthaugh | Derwenthaugh Industrial Estate, Swalwell, NE16 3BJ | Marshalls |
| | Hawks Road | Hawks Road, Gateshead, NE8 3BN | Breedon |
| | Longshanks Road | Longshanks Road, Birtley, DH3 1QZ | North East Concrete |
| | Nest Road | Nest Road, Felling, Gateshead, NE10 0EY | Aggregate Industries |
| | South Shore Road | South Shore Road, Gateshead, NE8 3AE | Tarmac |
| Newcastle | Brunswick Concrete Plant (Breedon) | Brunswick Industrial Estate, Brunswick, Newcastle-upon-Tyne, NE13 7BA | Breedon |
| | Brunswick Plant (Tarmac) | Brunswick Industrial Estate, Brunswick, Newcastle-upon-Tyne, NE13 7BA | Tarmac |
| | Newburn | High Street, Newburn, Newcastle upon Tyne, NE15 8LN | North East Concrete |
| North Tyneside | Howdon Concrete Plant | Willington Quay, Wallsend, NE28 6UR | Breedon |
| South Tyneside | South Shields Concrete Plant | Wilson's Yard, Jarrow Road, South Shields, NE34 9PL | Breedon |
| | Tyne Dock | Tyne Dock, South Shields, NE34 9PL | Breedon |
| Sunderland | Sunderland Concrete Plant | European Way, Pallion Industrial Estate, Sunderland, SR4 6SS | Tarmac |
| | Wilden Road | Wilden Road, Washington, NE38 8QB | Hanson |
| | Low Southwick | Pottery Road, Low Southwick, Sunderland, SR5 2BP | Breedon |
| | Springwell Quarry | Springwell Road, Gateshead, NE9 7SQ | Tyneside Minimix |

Asphalt coating plants in Tyne and Wear

| Planning Authority | Site | Location | Operator |
|---------------------------|-----------------|---|---------------------|
| Gateshead | Longshanks Road | Longshanks Road, Birtley, DH3 1QZ | North East Concrete |
| Newcastle | Newburn Haugh | Riverside Court, Newburn Haugh Industrial Estate, Newcastle upon Tyne, NE15 8SG | Tynedale Roadstone |
| Newcastle | Paradise Works | Paradise Works, Scotswood Road, Newcastle upon Tyne, NE15 6BZ | Jobling Purser |
| North Tyneside | Whitehill Point | Whitehill Point, Hayhole Road, North Shields, NE29 6DY | Northumbrian Roads |
| Sunderland | Hendon | East Quay South, Hudson Dock, Sunderland, SR1 2BU | Northumbrian Roads |