Lincolnshire Local Aggregate Assessment

January 2026 (reporting 2024 data)

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Executive summary

The government's National Planning Policy Framework (NPPF) seeks to ensure a steady and adequate supply of aggregate minerals. To help achieve this, mineral planning authorities (including Lincolnshire County Council) are required to prepare a local aggregate assessment on an annual basis.

Each assessment is required to:

a) forecast future demand for aggregates based on both the rolling average of 10-years sales data and other relevant local information;

b) analyse all aggregate supply options, including recycled and secondary sources (as evidenced in landbanks, capacity data and mineral sites identified in local plans); and

c) assess the balance between supply and demand alongside current economic and environmental circumstances to determine whether there is a shortage or surplus of supply and how any shortfalls will be addressed.

This local aggregate assessment covers the administrative county of Lincolnshire and includes published aggregate sales and reserves data relating to 2024. The key points from this assessment are set out in the table at the end of this summary.

Sand and gravel

In 2024, Lincolnshire had 9 active sand and gravel quarries and extraction sites producing aggregates. In addition, there were three sites that were inactive, two of which were pending commencement of operations. One of the active sites, Kettleby Quarry, was currently working reserves located in the adjoining authority of North Lincolnshire.

Lincolnshire is subdivided into three sand and gravel production areas in the adopted Lincolnshire Minerals and Waste Local Plan: the Lincoln Trent Valley Production Area, Central Lincolnshire Production Area and South Lincolnshire Production Area. In previous years, the sales and landbank data has been reported separately for each of these production areas. However, since 2021, there has been a reduction in the number of operators in the Central Lincolnshire Production Area. As a result, dividing the data between the production areas would no longer comply with the confidentiality undertaking agreed with the minerals industry. The 2024 data therefore only relates to the county as a whole.

In 2024, sand and gravel aggregate sales in Lincolnshire amounted to 2.240 million tonnes (mt). This represents a continued fall in sales, although the 10-year average from 2015 to 2024 has increased slightly to 2.377mt per annum.

After considering local factors, national growth projections and recent production levels, the latest evidence suggests that the calculation of landbanks should continue to be based on the rolling 10-year average sales. On this basis, the permitted reserves of 19.035mt at the end of 2024 provided a landbank of 8.01 years.

At the end of 2024, there were three planning applications that were pending determination that, if granted, would collectively provide an additional 4.95mt of sand and gravel reserves.

Crushed rock

Lincolnshire produces both limestone and chalk crushed rock aggregate. Both have limitations as aggregate, but the use of chalk is particularly restricted (hence, they are considered separately).

In 2024, Lincolnshire had 15 limestone quarries (excluding dormant sites and sites that exclusively produce building stone), but six were either inactive or only produced non-aggregate that year. Sales of limestone aggregate in 2024 amounted to 1.559mt, an increase from 2023 and significantly higher than the latest 10-year average (1.179mt). Sales remain high following sustained growth in recent years, with the three-year average sales figure of 1.487mt representing a 26% increase over the 10-year average. This appears to be due to increased demand for limestone crushed rock from both within the county, and particularly an increase in exports to adjoining areas.

To reflect the higher level of demand, the landbank will continue to be calculated using the last 3-years average sales as opposed to the 10-year sales average. Using this approach, the permitted reserves of limestone (13.479mt) at the end of 2024 provides a landbank of 9.06 years.

In 2024, Lincolnshire had two active chalk quarries and one inactive site (excluding dormant and suspended sites). To respect the confidentiality of the information provided from operators, annual chalk sales information cannot be published. Furthermore, due to the limited data available, it is not possible to calculate the landbank.

Updating the Lincolnshire Minerals and Waste Local Plan

The adopted Lincolnshire Minerals and Waste Local Plan covers the period up to 2031 and is made up of two documents:

- Core Strategy and Development Management Policies; and
- Site Locations.

The Site Locations document allocates eight sites for the winning and working of sand and gravel. When the existing Minerals and Waste Local Plan was adopted, Lincolnshire had sufficient permitted reserves of crushed rock to last beyond the plan period to 2031. Consequently, further sites were not allocated in the Site Locations document.

Following a review of the existing plan, work is underway on a new Lincolnshire Minerals and Waste Local Plan covering the period to 2042.

Consultation on an Issues and Options document was carried out between 28 June and 12 August 2022 and a call for sites exercise was carried out in conjunction with the consultation.

Further consultation on our Preferred Approach to updating the plan was carried out between July and September 2024. The preferred approach consultation document identified a shortfall in provision for both sand and gravel and crushed rock (limestone) for the proposed new plan period and identified several ‘preferred’ sites to meet identified requirements.

The next stage will be a further 6-week consultation on a final ‘proposed submission’ draft of the new plan, in advance of the formal public examination process.

Figure 1: The county of Lincolnshire

Table 1: Summary of findings

Aggregate	Sales in 2024 (thousand tonnes)	Change in sales from previous year	10 year sales average (thousand tonnes)	3 year sales average (thousand tonnes)	Sales trend (10 years)	LAA annual provision rate (thousand tonnes)	Permitted reserves at 31 December 2024 (thousand tonnes)	Change in permitted reserves from previous year	Landbank (years)	Change in landbank from previous years
Land won sand and gravel	2,240	↓ down	2,377	2,333	↓ down	**2,377**	19,035	↓ down	8.01	↓ down
Crushed rock (limestone)	1,559	↑ up	1,179	1,487	↑ up	**1,487**	13,479	↓ down	9.06	↓ down
Total primary aggregates	3,799	↑ up	3,556	3,820	↑ up	N/A	32,514	↓ down	N/A	N/A

1. Introduction

1.1 Lincolnshire County Council is a mineral and waste planning authority that oversees the long term planning of mineral extraction and safeguarding across the county of Lincolnshire.

1.2 To secure a steady and adequate supply of minerals in the future, we must prepare an annual Local Aggregate Assessment (in line with the requirements of the National Planning Policy Framework).

1.3 This document is the Local Aggregate Assessment for the county of Lincolnshire. It sets out the current and future situation in terms of aggregate supply and demand in Lincolnshire and indicates the provision that will be needed to ensure that the county makes an appropriate contribution. This Local Aggregate Assessment includes published aggregate sales and reserves data relating to the year 2024.

1.4 Previous Local Aggregate Assessments, produced as part of the Lincolnshire Minerals and Waste Local Plan monitoring procedures, are available on our website.[1]

National Planning Policy Framework

1.5 The National Planning Policy Framework (NPPF) states that mineral planning authorities should plan for a steady and adequate supply of aggregates by:

a. preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources);

b. participating in the operation of an Aggregate Working Party[2] and taking the advice of that party into account when preparing their Local Aggregate Assessment;

c. making provision for the land-won and other elements of their Local Aggregate Assessment in their mineral plans, taking account of the advice of the Aggregate Working Parties and the National Aggregate Co-ordinating Group as appropriate. Such provision should take the form of specific sites, preferred areas and/or areas of search and locational criteria as appropriate;

d. taking account of any published National and Sub National Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates;

e. using landbanks of aggregate minerals reserves principally as an indicator of the security of aggregate minerals supply, and to indicate the additional provision that needs to be made for new aggregate extraction and alternative supplies in mineral plans;

f. maintaining landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock, whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised. Longer periods may be appropriate to take account of the need to supply a range of types of aggregates,

[1] www.lincolnshire.gov.uk/directory-record/63743/local-aggregate-assessment

[2] Aggregate working parties collect data and monitor the production and supply of aggregate minerals, the reserves of aggregate minerals and provide technical advice on supply and demand across their areas.

locations of permitted reserves relative to markets, and productive capacity of permitted sites;

g. ensuring that large landbanks bound up in very few sites do not stifle competition; and

h. calculating and maintaining separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market.

National and regional guidelines

1.6 For over 40 years, geographical imbalances in the occurrence of suitable natural aggregate resources and the areas where they are needed have been met through the Managed Aggregate Supply System. The underpinning concept behind this system is that mineral planning authorities which have adequate resources of aggregates make an appropriate contribution to national as well as local supply. Government guidance on this system is set out in the government's online Planning Practice Guidance (PPG). This states that mineral planning authorities are expected to prepare Local Aggregate Assessments to assess demand for and supply of aggregates. These should:

- forecast the demand for aggregates based on both the rolling average of 10-years sales data and other relevant local information;
- analyse all aggregate supply options, as indicated by landbanks, mineral plan allocations and capacity data eg marine licences for marine aggregate extraction, recycled aggregates and the potential throughputs from wharves; and
- assess 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.

1.7 The PPG lists sources of information that may assist in the preparation of a local aggregate assessment, which includes published national and sub national guidelines on aggregate provision.

1.8 Prior to the introduction of the NPPF, mineral planning authorities were required to make provision for the sub-regional apportionment of National and Regional Guidelines for Aggregate Provision in England. The most recent guidelines were published in 2009 and covered the period 2005-2020. The guidelines required the East Midlands region to provide 500mt of crushed rock, 174mt of sand and gravel, and 110mt of alternative materials between 2005 and 2020.

1.9 Based on these guidelines, the East Midlands Aggregates Working Party recommended sub-regional apportionment (SRA) figures for each mineral planning authority for inclusion in the East Midlands Regional Plan. For Lincolnshire, this SRA equated to an average of 3.28mt of sand and gravel and 1.1mt of crushed rock (limestone) per annum from 2005 to 2020.

1.10 These figures were approved by the East Midlands Regional Assembly in March 2010, but were never adopted due to the secretary of state's decision to abolish Regional Spatial Strategies in July 2010.

1.11 At the meeting of the working party in February 2013, doubts were expressed about the validity of the 2009 guidelines. It was considered that the figures were out of date as they were only

based on aggregate output from a period of economic growth, and that they should not be taken into account in identifying future levels of provision. It was further agreed that future levels of provision be based on a rolling average of 10-years sales data and other relevant local information, in accordance with the NPPF.

1.12 Although the SRA is considerably out of date and only covered the period up to 2020, it is still referred to in this assessment, as it is a requirement of the NPPF to have regard to the latest national and sub-national guidelines in future provision.

Lincolnshire Minerals and Waste Local Plan

1.13 The adopted Lincolnshire Minerals and Waste Local Plan covers the period up to the end of 2031 and is made up of two parts: The Core Strategy and Development Management Policies document, adopted on 1 June 2016, and the Site Locations document, adopted on 15 December 2017.

1.14 In relation to sand and gravel provision, the Core Strategy and Development Management Policies continued the long-established approach of subdividing the county into three production areas. At the time this was considered to reflect the fact that Lincolnshire covers a very large area of land with most of the active workings clustered into three groups, each generally serving the surrounding production area.

1.15 To meet projected demand over the plan period (2014-2031), policy M2 of the Core Strategy and Development Management Policies makes provision for 42.66mt of sand and gravel to be extracted at a rate of 2.37mt per annum. This provision is split between the three production areas as follows:

- Lincoln Trent Valley: 18.00mt (1.0mt per annum).
- Central Lincolnshire: 9.00mt (0.5mt per annum).
- South Lincolnshire: 15.66mt (0.87mt per annum).

1.16 After accounting for permitted reserves, the Site Locations document allocated eight sites to address a shortfall of 11.12mt, which is divided between the three production areas as follows:

- Lincoln Trent Valley: 4.56mt
- Central Lincolnshire: 1.21mt
- South Lincolnshire: 5.35mt

1.17 For limestone and chalk, the policy position set out in the Core Strategy and Development Management Policies is that there were sufficient reserves available in Lincolnshire to meet the requirements during the plan period. No sites were therefore allocated.

1.18 The adopted Minerals and Waste Local Plan was reviewed in February 2021. This found that the plan was delivering sufficient levels of aggregate to meet demand. However, the county council resolved to update the plan in full in order to address other issues which had been identified, and to improve the plan in general.

1.19 Consultation on an Issues and Options document was carried out between 28 June and 12 August 2022 and a call for sites exercise was carried out in conjunction with the consultation.

1.20 Further consultation on the council's Preferred Approach to updating the plan was carried out between 30 July and 24 September 2024. The preferred approach consultation document identified a shortfall in provision for both sand and gravel and

crushed rock (limestone) for the proposed new plan period and identified several 'preferred' sites to meet identified requirements.

1.21 The next stage will be a further 6-week consultation on a final 'proposed submission' draft of the new plan, in advance of the formal public examination process.

1.22 The detailed timetable and work programme relating to the preparation of the updated Minerals and Waste Local Plan is set out in the latest Lincolnshire Minerals and Waste Development Scheme.

1.23 Further details about the new plan and the next steps can be found at www.lincolnshire.gov.uk/planning/minerals-waste.

2. Types of aggregate produced in Lincolnshire

Sand and gravel

2.1 Lincolnshire has sand and gravel resources in fluvial (river), glacial, coastal and wind-blown deposits. During the 1970s the British Geological Survey carried out extensive sand and gravel resource assessments for much of Lincolnshire.

2.2 In 2010, Lincolnshire County Council commissioned the British Geological Survey to reassess the sand and gravel resources identified in the assessments and identify potential resources in areas of the county not covered by them. The subsequent Lincolnshire Sand and Gravel Assessment (CR/10/049) indicates that the principal areas containing the highest quality resources are:

a) fluvial deposits in the Trent Valley north of Gainsborough;
b) fluvial deposits lying between the Rivers Trent and Witham, to the west of Lincoln;
c) an area of fluvial deposits underlying the floodplain of the River Witham south-east of Lincoln;
d) spreads of river terrace deposits and glaciofluvial deposits around Woodhall Spa; and
e) fluvial deposits around Market Deeping.

2.3 Of these, the resources around Market Deeping, west of Lincoln and around Woodhall Spa have been, or are currently, worked. The thick and extensive sand and gravel resources that underlie the Witham floodplain southeast of Lincoln have not been exploited. The report indicates that resources in the Trent Valley north of Gainsborough are also thick, extensive and likely to be of good quality but are not currently worked.

2.4 Outside the area of the county that had been the subject of surveys, the British Geological Survey report states that available data proved too sparse and unfavourably distributed to systematically identify and classify sand and gravel resources. However, such data as was available indicated that suitable resources may exist in fluvial deposits around Sleaford, between Billingborough and Dowsby and near Long Bennington.

Limestone

2.5 Lincolnshire has limited resources of rock suitable for use as crushed rock aggregate. The Lincolnshire Limestone Formation of Middle Jurassic age (Inferior Oolite) is the major limestone unit in Lincolnshire. Its outcrop runs north to south through Lincoln and Grantham, forming the prominent escarpment of the Lincoln Edge.

2.6 A variety of hard rocks are, when crushed, suitable for use as aggregates. Their technical suitability for different applications depends on their physical characteristics, such as crushing strength and resistance to impact and abrasion. Higher quality aggregates are required for coating with bitumen for road surfacing, or for mixing with cement to produce concrete. For applications, such as constructional fill and drainage media, with less demanding specifications, lower quality materials are acceptable.

2.7 Crushed Lincolnshire limestone provides aggregates, which are of relatively low strength and with poor resistance to frost damage

as they have moderate to high values of water absorption. They are, therefore, generally only suitable for use as constructional fill or sub base material.

2.8 Limestone is currently worked for aggregates at several small-to-medium-sized quarries, mostly between Stamford and Lincoln. Several quarries also produce agricultural lime and small amounts of building stone.

Chalk

2.9 Chalk is a relatively soft, fine-grained, white limestone, consisting mostly of the debris from planktonic algae. The chalk in Lincolnshire is divided into five distinct formations:

- Ferriby Chalk, with a red-coloured chalk at the base.
- Hunstanton Formation, or Red Chalk.
- Welton Chalk.
- Burnham Chalk.
- Flamborough Chalk.

2.10 The Burnham and Welton Chalks are of high purity (generally greater than 97 per cent calcium carbonate), while the overlying Flamborough Chalk and the underlying Ferriby Chalk are mainly of medium purity (greater than 93% calcium carbonate). The Burnham and Flamborough Chalks are concealed beneath drift which thickens towards the coast.

2.11 Chalk has been extracted within Lincolnshire for both aggregate and industrial purposes, including iron making, lime production for steel manufacture, industrial fillers, for constructional purposes and agricultural use.

2.12 The chalk in Lincolnshire is harder and drier than the chalk in southern England. Because of this, it can be used as aggregate, but only for less demanding applications like fill and sub-base material.

3. Land-won aggregates in Lincolnshire

Introduction

3.1 Production and sales data for aggregate minerals is collected on an annual basis through an aggregates survey undertaken on behalf of the East Midlands Aggregates Working Party. Annually published reports present data on production and reserves for the county and the East Midlands back to the early 1970s.

3.2 The East Midlands Aggregates Working Party's Annual Report 2024 (based on 2023 reporting data)[3] is the latest available. However, the primary data for Lincolnshire referred to in this Local Aggregate Assessment are the results for the 2024 annual aggregates survey collated by the County Council.

3.3 Generally, every fourth year, a major in-depth Aggregate Minerals Survey is undertaken nationally, which provides an in-depth understanding of national and sub-national sales, inter-regional flows, transportation, consumption and permitted reserves of primary aggregate. The most recent national Aggregate Minerals Survey undertaken relates to the period 1 January to 31 December 2023.[4]

3.4 Other recent full Aggregate Mineral Surveys include those carried out for the years 2019 (postponed from 2018), 2014 and 2009. Due to the postponement of the 2018 Aggregate Minerals Survey, the East Midlands Aggregates Working Party agreed that the annual aggregates survey would seek information on sales destinations from operators to help bridge the gap in aggregate flow data. This provided helpful information on the distribution of sales in 2018 but did not provide the same level of detail as a full Aggregate Mineral Survey, particularly with respect to imports. All of these surveys are presented in this assessment to provide data on the flow of aggregates into and out of the county and how these flows have changed over time between the surveys.

Sand and gravel

Production sites

3.5 Table 2 lists permitted sand and gravel sites in Lincolnshire that were included in the 2024 survey. The table excludes sites classified as "dormant" either under the Planning and Compensation Act 1991 or the Environment Act 1995. Figure 2 shows the locations of these sand and gravel sites in Lincolnshire (excluding dormant sites).

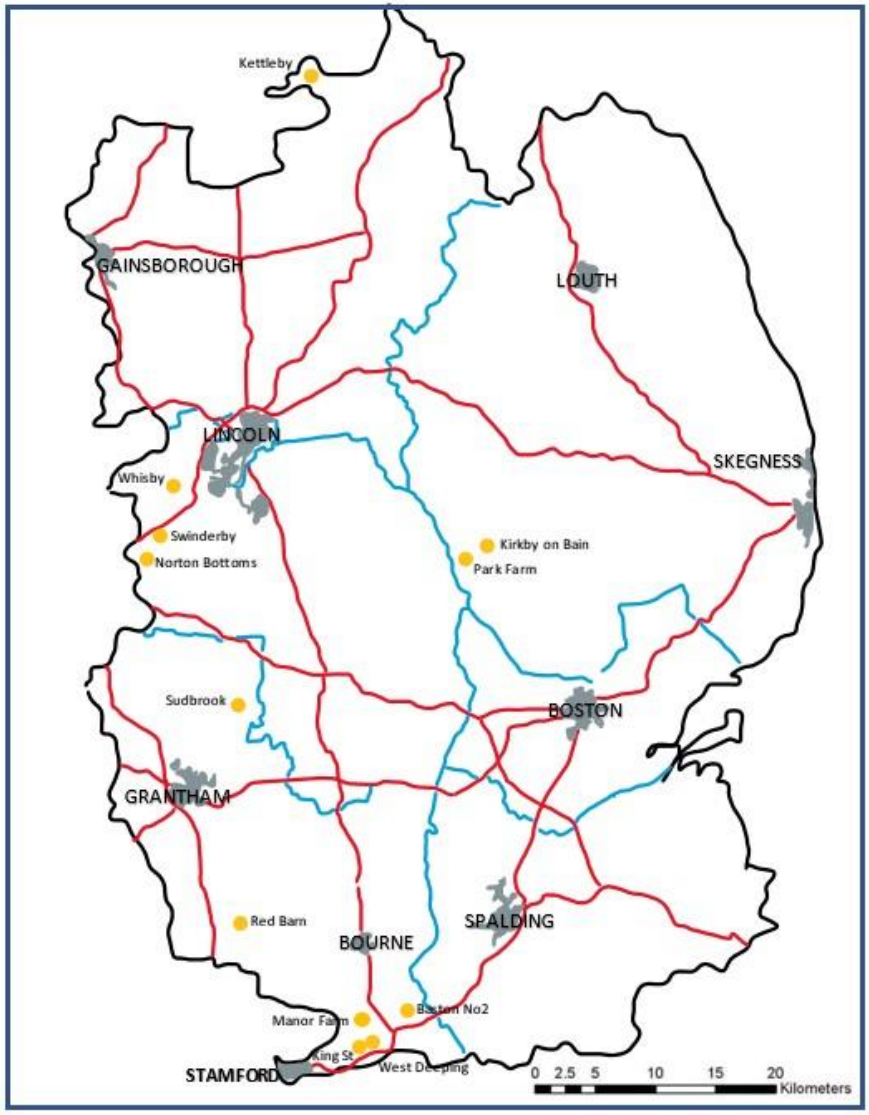
[3] www.gov.uk/guidance/aggregates-working-parties-annual-reports

[4] Collation of the Results of the 2023 Aggregate Minerals Survey for Great Britain, BGS/MHCLG, 2025.

Table 2: Sand and gravel sites included in the 2024 survey

Site	Status in 2024	District	Production Area
Whisby Quarry	Active	North Kesteven	Lincoln Trent Valley
Norton Bottoms Quarry	Active	North Kesteven	Lincoln Trent Valley
Swinderby Quarry	Active	North Kesteven	Lincoln Trent Valley
Sudbrook Quarry	Inactive	South Kesteven	Lincoln Trent Valley
Park Farm, Tattershall Thorpe	Active	East Lindsey	Central Lincolnshire
Kirkby on Bain Quarry	Active	East Lindsey	Central Lincolnshire
Kettleby Quarry, Bigby	Active – working reserves outside county boundary but extensions have been allocated in the Sites Locations document	West Lindsey	Central Lincolnshire
Red Barn, Castle Bytham	Inactive	South Kesteven	South Lincolnshire
Baston No 2 Quarry	Active	South Kesteven	South Lincolnshire
West Deeping Quarry (Rectory Farm)	Active	South Kesteven	South Lincolnshire
King Street, West Deeping	Active	South Kesteven	South Lincolnshire
Manor Farm, Greatford	Inactive – not yet commenced	South Kesteven	South Lincolnshire

Figure 2: Sand and gravel sites in Lincolnshire in 2024 (excluding dormant sites)



Production areas

3.6 Previously, data obtained through the mineral surveys on sand and gravel sales were reported for each production area and for the county as a whole. In 2021, however, the number of operators in the Central Lincolnshire Production Area fell to two. This means that under the confidentiality undertaking agreed with the industry, subsequent data from the mineral survey cannot be published for this production area without the consent of the companies operating in this area. That consent has not been forthcoming. This means that data for the other production areas cannot be published either because, if these were subtracted from the county total, the confidential data for Central Lincolnshire would be revealed. As a result, this report only reports data for the whole county.

Sand and gravel sales

3.7 National minerals guidance on the managed aggregate supply system requires that a forecast of the demand for aggregates is based on both the rolling average of 10-years sales data and other relevant local information. In addition, the guidance requires mineral planning authorities to look at the last three years of sales to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply.

3.8 Table 3 shows sand and gravel sales over the last 10 years and the average of these for the 10 and 3-year periods.

Table 3: Sales of sand and gravel 2015-2024 (figures in million tonnes)

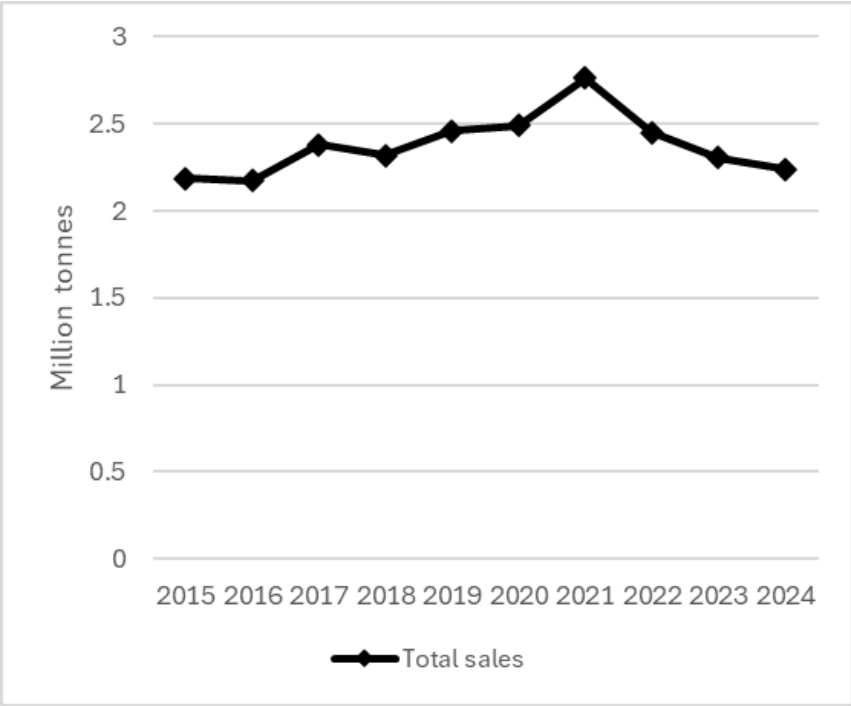
Year	Total sales
2015	2.185
2016	2.173
2017	2.379
2018	2.320
2019	2.460
2020	2.490
2021	2.763
2022	2.453
2023	2.306
2024	2.240
Average (2015-2024)	**2.377**
Average (2022-2024)	**2.333**

3.9 Table 3 shows that over the last 10 years there has been steady rise in sales, peaking at 2.763mt in 2021, following which there has been a gradual decline in sales over the last three years. Sales of sand and gravel in 2024 were 2.240mt. The average annual sales over the 10-year period (2015-2024) were 2.377mt, which closely aligns with the provision rate set in the adopted Core Strategy and Development Management Policies document of 2.37mt.

3.10 During the three-year period (2022-2024), annual sales of sand and gravel in the county averaged 2.333mt. This figure is marginally (1.9%) less than the 10-year average of 2.377mt and reflects the general trend during last three years of a decline in sales.

3.11 Sales of sand and gravel over the latest 10-year period are illustrated in figure 3.

Figure 3: Sand and gravel sales 2015-2024



Permitted reserves and landbanks

3.12 The 2024 annual aggregates survey data shows that permitted reserves of sand and gravel in Lincolnshire at the end of 2024 totalled some 19.035 million tonnes.

3.13 Table 4 calculates the landbank of permitted reserves (expressed as the number of years' supply remaining) for the county based on three alternative provision rates:

- Sub regional apportionment (SRA).
- Core Strategy & Development Management Policies (the first part of the adopted Minerals and Waste Local Plan).
- 10-year average annual sales.

3.14 Although the East Midlands Aggregates Working Party has agreed that the SRA is out-of-date (see section 1), it is included in this section because the NPPF requires it to be taken into account.

3.15 The National Planning Policy Framework states that mineral planning authorities should make provision for the maintenance of landbanks of at least seven years for sand and gravel. It also states that longer periods may be appropriate to take account of the locations of permitted reserves relative to markets, and the productive capacity of permitted sites.

Table 4: Landbank of sand and gravel based on alternative provision rates (as at 31 December 2024)

Permitted reserves as at 31.12.24 (mt)	Annual rate based on SRA (mt)	Landbank based on SRA (years)	Annual rate based on the Minerals & Waste Local Plan (mt)	Landbank based on the Minerals & Waste Local Plan (years)	Annual rate based on 10 year average sales (mt)	Landbank based on 10 year average sales (years)
19.035	3.280	**5.80**	2.370	**8.03**	2.377	**8.01**

3.16 Table 4 shows that, at the end of 2024, the landbank of sand and gravel exceeded seven years' supply when set against all but the sub-regional apportionment (SRA) provision rates.

3.17 At the end of 2024, there were three planning applications that were pending determination that, if granted, would collectively provide an additional 4.95mt of sand and gravel reserves (see table 5 below).

Table 5: Planning applications for sand and gravel extraction pending determination at 31 December 2024

Site location and development	Allocation reference (if applicable)	Reserves
• Extension to Kettleby Quarry	• Site allocation MS07/08-CL	• 2.4mt
• Proposed new quarry at Thetford House Farm, Baston		• 2.4mt
• Proposed new quarry at land south of North Kelsey Road, Caistor	• Site allocation MS09-CL	• 0.15mt

3.18 The application at Kettleby Quarry was subsequently granted planning permission, and the application at North Kelsey Road, Caistor is subject to a resolution to grant planning permission subject to approval of a Section 106 legal agreement. The application at Thetford House Farm, Baston remained undetermined at the time of writing. In addition to the above, in July 2025 an existing planning permission for sand and gravel extraction at Manor Farm, Greatford expired, which would lead to a reduction in reserves of around 3.0mt.

Productive capacity

3.19 Individual operator returns for the aggregate surveys are treated as confidential and, consequently, current production levels or mineral reserves from individual sites cannot be reported. Lincolnshire's local aggregate assessments up to January 2019 (reporting 2017 data), thus, attempted to estimate these from information contained in planning application and other public files. In practice, however, this approach proved to be unreliable because it did not consider any fluctuations in production levels from those set out in the original applications, or any reassessments of reserves by the operators.

3.20 In an attempt to remedy this situation, we switched from estimating the reserves at each quarry to a more qualitative approach. The revised method evaluated the likelihood of any issues arising within the next 7 years (the minimum period for which a landbank needs to be maintained) that might affect productive capacity, which was considered to be more in line with policy M3 of the Core Strategy & Development Management Policies. However, this method has since been re-appraised and found to be ineffective in demonstrating any issues in relation to productive capacity.

3.21 Tables 6a to 6c, therefore, set out the basic information in respect of planned production levels and the end dates for planning permissions within each production area. Other than providing an indication of permission end dates that fall within the plan period, this information cannot accurately portray the current status of production capacity in Lincolnshire. Unfortunately, without the industry's agreement to the publication of annual sales and reserves information for individual quarries, there appears to be no way to reliably assess whether there are any issues with productive capacity.

3.22 As tables 6a to 6c show, there is currently one site with an end date that falls within the existing plan period. Park Farm Quarry (Tattershall), has a current planning permission end date of 2027. This will be taken into account during the current updating of the plan.

3.23 It should also be noted that the majority of sand and gravel sites in the county have no planning restrictions on production levels. Consequently, should any site close, there are other sites that can step up production to compensate.

Table 6a: Productive capacity: Lincoln Trent Valley Production Area

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
Whisby	Tarmac	Active	300,000	20 December 2078	Information is based on the 2014 application. Productive capacity is not limited by planning permission.
Swinderby Quarry	Cemex	Active	550,000 to 600,000	24 June 2073	Information is based on the 2008 application. Productive capacity is not limited by planning permission
Norton Bottoms	Breedon	Active	500,000	7 June 2079	Information is based on the 2017 planning application. Productive capacity is not limited by planning permission.
Sudbrook Quarry, Ancaster	Landowner	Inactive	100,000	21 February 2042	Information is based upon the 2019 Review of Old Minerals Permissions (ROMP) application. Productive capacity is not limited by planning permission.
Total (all sites)			**1,500,000**		**Planned production levels exceed the annual provision rate in the Core Strategy and Development Management Policies (1.0 mt).**

Table 6b: Productive capacity: Central Lincolnshire Production Area

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
Park Farm, Tattershall Thorpe	Breedon	Active	275,000	31 December 2027	Information is based on the 2007 application. Productive capacity is limited by planning condition: The total amount of material (sand, gravel, concrete, mortar and recycled aggregate) leaving the site shall not exceed 322,500 tonnes in any 12 month period.

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
Kirkby on Bain Quarry	Holcim	Active	250,000	25 August 2077	Information is based on the 2015 application. Productive capacity is not limited by planning permission.
Kettleby Quarry, Bigby	Breedon	Active	170,000	Up to 14 February 2053*	Information is based on the 2023 application (pending in 2024 – subsequently granted in February 2025). Productive capacity is not limited by planning permission. *Development to cease no later than 25 years from the date of commencement, or when the winning and working of sand and gravel has permanently ceased, whichever is the earlier
Total (all sites)			**695,000**		**Planned production levels exceed the annual provision rate in the Core Strategy and Development Management Policies (0.5Mt).**

Table 6c: Productive capacity: South Lincolnshire Production Area

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
Red Barn, Castle Bytham	Landowner	Inactive	100,000	25 September 2067	Information is based on the 2005 application. Productive capacity is not limited by planning permission.
Baston No 2 Quarry	Heidelberg Materials	Active	250,000 to 350,000	19 August 2084	Information is taken from the 2022 applications. Productive capacity is not limited by planning permission.
West Deeping (Rectory Farm), Quarry	Breedon	Active	300,000	21 February 2042	Information is based on the 2018 ROMP application. Productive capacity not limited by planning permission.

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
King Street, West Deeping	Cemex	Active	350,000 to 400,000	24 October 2057	Information is based on the 1989 application and subsequent extensions. Productive capacity is not limited by planning permission.
Manor Farm, Greatford	Landowner	Inactive	200,000	07 July 2042*	Information is based on the 2020 planning application. Productive capacity is not limited by planning permission. *Permission subsequently expired in 2025.
Total (all sites)			**1,350,000**		**Planned production levels exceed the annual provision rate in the Core Strategy and Development Management Policies (0.87Mt).**

Regional production

3.24 For many years, Lincolnshire was the second highest producer of sand and gravel in the East Midlands region after Nottinghamshire, but since 2013 has overtaken that county for year-on-year production.

3.25 Between 2014 and 2023 (the latest 10-year period for which full sales data is available), the production of sand and gravel in Lincolnshire as a proportion of the total output in the East Midlands averaged around 37% - see table 7 below. The table incorporates data from the East Midlands Aggregates Working Party Annual Monitoring Report 2024 (2023 data).

Table 7: Sand and gravel (aggregate) sales from Lincolnshire compared with those from the East Midlands (2014-2023)

Year	East Midlands region (mt)	Lincolnshire (mt)	Lincolnshire as percentage of regional sales
2014	6.850	2.149	31.4
2015	6.910	2.185	31.6
2016	6.950	2.173	31.3
2017	6.790	2.379	35.0
2018	7.150	2.320	32.5
2019	7.040	2.460	34.9
2020	5.311	2.490	46.9
2021	6.426	2.763	43.0
2022	5.891	2.453	41.6
2023	4.926	2.306	46.8
Average	**6.424**	**2.368**	**36.9**

3.26 Lincolnshire's proportion of regional production saw a sharp increase in 2020 (to 46.9%) and has remained relatively high since. This appears to be due to overall sales across the East Midlands falling sharply in 2020, whilst sales in Lincolnshire at that time remained more stable.

Exports and imports

3.27 Details of the flow of aggregates into and out of the county are provided through the national Aggregate Mineral Surveys carried out generally every four years. The most recent national Aggregate Minerals Survey undertaken relates to the period 1 January to 31 December 2023. Other recent national surveys include those carried out for the years 2019 (postponed from 2018), 2014 and 2009, with more limited information provided by the East Midlands annual survey carried out in 2018. The results of these surveys with respect to the destinations of sand and gravel extracted in the county are summarised in table 8. The main destinations during each survey year are compared as percentages of total sales.

3.28 Table 8 shows that, in 2023, around half (51.6%) of the sand and gravel extracted in Lincolnshire was sold within its administrative boundaries. The remainder was exported to a variety of locations, but the main export markets were other adjoining mineral planning authorities within the East Midlands and the East of England. This continues a trend seen over the past 10 to 15 years of a growth in exports since the last recession. As shown in table 8, there have been significant fluctuations across the survey years but sand and gravel exports to other mineral planning authorities within the East Midlands have increased significantly when compared to the results of the 2009 survey. These exports mainly come from

quarries that are located close to the county boundaries with neighbouring authorities.

3.29 Outside the East Midlands region, the most notable exports identified in the 2023 survey were to the East of England and, in particular, the adjoining areas of Cambridgeshire and Peterborough, which received 16.2% of total sales. This region represents a significant and more recent draw on mineral reserves in the south of Lincolnshire.

3.30 The volume of sales to the other adjoining region of Yorkshire and Humberside saw a reduction from a high of 8.8% of total sales in 2014, to 3% in 2023.

3.31 Total imports and exports of sand and gravel have fluctuated significantly in recent years. In 2009, Lincolnshire imported slightly more sand and gravel (503,000 tonnes) than it exported (470,000 tonnes)[5] In contrast, by 2014, only 163,000 tonnes of sand and gravel were imported into the county - a reduction of 68% on 2009, making Lincolnshire a significant net exporter of sand and gravel (some 1,160,000 tonnes[6]). This trend continued in 2019, with only 93,000 tonnes of sand and gravel imported into the county[7] and Lincolnshire remaining a significant net exporter of sand and gravel by over 1.2 million tonnes. In 2023, 250,000 tonnes of sand and gravel were imported into Lincolnshire[8], however despite this increase, the county remained a significant net exporter by around 865,000 tonnes.

3.32 Detailed information in relation to the source of imports is not reported in the national Aggregate Mineral Surveys. However, summary information in the form of broad percentage bands were collated from the 2023 survey and provided to aggregate working parties in each region to facilitate compilation of Local Aggregate Assessments and aid understanding of flow patterns. Table 9 illustrates the sources of sand and gravel consumed in Lincolnshire in 2023.

[5] Collation of the results of the 2009 aggregate minerals survey for England and Wales, BGS/DCLG, October 2011.

[6] Collation of the results of the 2014 Aggregate Minerals survey for England and Wales, BGS/DCLG, March 2016.

[7] Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales, BGS/MHCLG, 2021.

[8] Collation of the Results of the 2023 Aggregate Minerals Survey for Great Britain, BGS/MHCLG, 2025.

Table 8: Destination of sand and gravel sales from Lincolnshire in 2009, 2014, 2018 (including 13,094 tonnes of non-aggregate), 2019 and 2023

Destination by region	Destination by sub region	2009 sales (tonnes)	2009 sales (%)	2014 sales (tonnes)	2014 sales (%)	2018 sales (tonnes)	2018 sales (%)	2019 sales (tonnes)	2019 sales (%)	2023 sales (tonnes)	2023 sales (%)
East Midlands	Lincolnshire	1,515,900	76.3	826,144	38.4	569,939	24.4	1,110,070	45.0	1,190,740	51.6
East Midlands	Derbyshire and Peak District National Park Authority	10,872	0.5	22,585	1.0	90,208	3.9	74,144	3.0	59,360	2.6
East Midlands	Nottinghamshire	127,665	6.4	298,681	13.9	245,984	10.5	357,522	14.5	229,010	9.9
East Midlands	Leicestershire and Rutland	3,766	0.2	58,593	2.7	189,686	8.1	136,836	5.6	203,941	8.8
East Midlands	Northamptonshire	2,500	0.1	228,336	10.6	46,595	2.0	74,858	3.0	115,637	5.0
East Midlands	East Midlands (unknown)	42,204	2.1	280,967	13.1	575,949	24.7	279	0.0	348	0.0
East Midlands	**All sub-regions**	**1,702,907**	**85.7**	**1,715,306**	**79.8**	**1,718,361**	**73.6**	**1,753,709**	**71.2**	**1,799,036**	**78.0**
West Midlands	**All sub-regions**	**-**	**-**	**-**	**-**	**-**	**-**	**29,046**	**1.2**	**19,651**	**0.9**
East of England	Bedfordshire	-	-	-	-	34,732	1.5	-	-	172	0.0
East of England	Cambridgeshire and Peterborough	-	-	-	-	430,973	18.5	480,270	19.5	373,330	16.2
East of England	Essex, Southend and Thurrock	-	-	-	-	-	-	4	0.0	-	-
East of England	Norfolk	-	-	-	-	7,876	0.3	26,798	1.1	1,140	0.0
East of England	Suffolk	-	-	-	-	39	0.0	-	-	-	-
East of England	East of England (Unknown)	92,165	4.6	170,453	7.9	33,000	1.4	-	-	-	-
East of England	**All sub-regions**	**92,165**	**4.6**	**170,453**	**7.9**	**506,620**	**21.7**	**507,072**	**20.6**	**374,642**	**16.2**
South East	**All sub-regions**	**-**	**-**	**-**	**-**	**-**	**-**	**65,289**	**2.6**	**24,635**	**1.1**

Destination by region	Destination by sub region	2009 sales (tonnes)	2009 sales (%)	2014 sales (tonnes)	2014 sales (%)	2018 sales (tonnes)	2018 sales (%)	2019 sales (tonnes)	2019 sales (%)	2023 sales (tonnes)	2023 sales (%)
Yorkshire and Humberside	Humber sub-region	-	-	-	-	16,898	0.7	8,955	0.4	8,144	0.4
Yorkshire and Humberside	North Yorkshire	-	-	-	-	59	0.0	-	-	-	-
Yorkshire and Humberside	South Yorkshire	-	-	-	-	41,094	1.8	72,238	2.9	47,084	2.0
Yorkshire and Humberside	West Yorkshire	-	-	-	-	9,608	0.4	24,702	1.0	10,960	0.5
Yorkshire and Humberside	Yorkshire and Humberside (Unknown)	153,129	7.7	189,331	8.8	36,900	1.6	-	-	3,401	0.1
Yorkshire and Humberside	**All sub-regions**	**153,129**	**7.7**	**189,331**	**8.8**	**104,559**	**4.5**	**105,895**	**4.3**	**69,589**	**3.0**
Other	**All sub-regions**	**1,407**	**0.1**	**73,991**	**3.4**	**6,348**	**0.3**	**3,255**	**0.1**	**18,917**	**0.8**
Unknown	Unknown	36,421	1.8	-	-	-	-	-	-	-	-
All regions	**All sub-regions**	**1,986,029**	**100.0**	**2,149,081**	**100.0**	**2,335,888**	**100.0**	**2,464,266**	**100.0**	**2,306,470**	**100.0**

Table 9: Sources of sand and gravel consumed in Lincolnshire in 2023

Source of sand and gravel	Percentage band of consumption
Cambridgeshire	1-10%
Central Bedfordshire	<1%
Norfolk	<1%
Peterborough	1-10%
Lincolnshire	80-90%
Nottinghamshire	<1%
Staffordshire	<1%
Doncaster	1-10%
North Lincolnshire	1-10%

3.33 The surveys indicate that in recent times sand and gravel from Lincolnshire has been transported over greater distances than was generally the case in the past, particularly to neighbouring counties with their own indigenous resources. It appears that this may, at least in part, be due to the continuing rationalisation of mineral operations, with operators focussing production in Lincolnshire whilst mothballing sites elsewhere.

3.34 As illustrated in table 8, exports of sand and gravel increased significantly between 2009 and 2023, particularly to counties across the East Midlands and to the adjoining areas of Cambridgeshire and Peterborough in the East of England. The latest available information indicates that some of these exports may have been offset to a limited extent by imports of sand and gravel into Lincolnshire from authorities in the East of England, however Lincolnshire remains a significant net exporter of sand and gravel. To date, Lincolnshire has been able to accommodate the increased demand for exports because the internal market has been significantly depressed.

3.35 Should demand within Lincolnshire return to pre-recession levels, supply issues may arise with production in the county unable to meet both increased internal demands, together with the unsustainable higher demand from the surrounding counties. This is a situation that could, in part, be avoided through authorities making sufficient provision in their mineral local plans, wherever possible, to meet demand currently being met by imports - in line with the NPPF. In particular, paragraph 223 of the framework states, amongst other things, that policies in local plans should aim to source mineral supplies indigenously. Thus, mineral planning authorities should have regard to the contribution to demand increasingly being met from neighbouring authorities in plan making and the production of local aggregate assessments unless it can be clearly demonstrated that there are very good reasons why the sand and gravel cannot be sourced indigenously.

Crushed rock (limestone and chalk)

Production sites

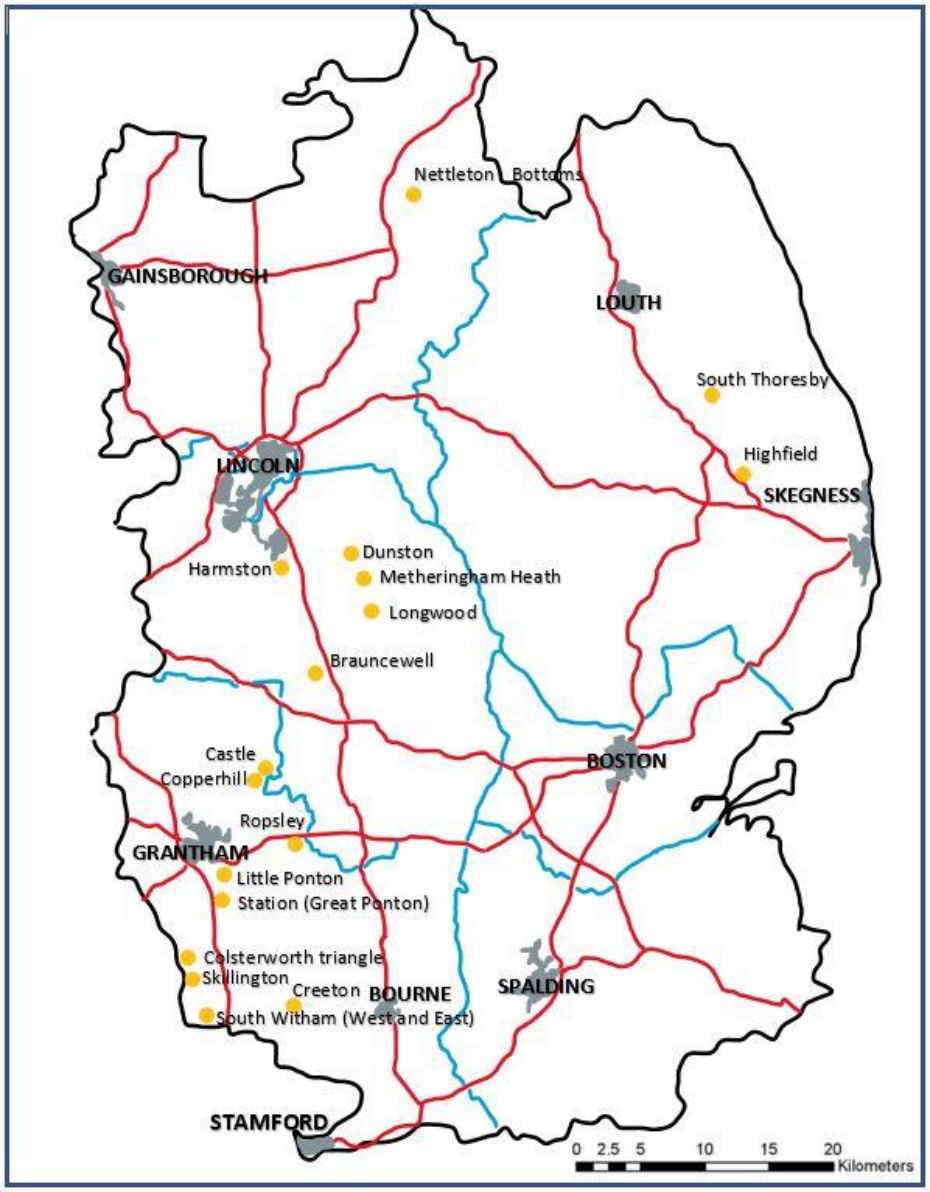
3.36 At the end of 2024, there were 18 crushed rock sites in Lincolnshire (see table 10 below), excluding:

- sites classified as dormant under the Environment Act 1995 or the Planning and Compensation Act 1991; and
- sites currently subject to the suspension provisions of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

Table 10: Crushed rock sites included in the 2024 survey

Quarry name	Status in 2024	District	Material
South Thoresby	Active	East Lindsey	Chalk
Highfield Quarry, Welton le Marsh	Active	East Lindsey	Chalk
Nettleton Bottoms	Inactive	West Lindsey	Chalk
Longwood	Active	North Kesteven	Limestone
Brauncewell	Active	North Kesteven	Limestone
Dunston	Active	North Kesteven	Limestone
Metheringham Heath (also produces building stone)	Active, but not producing aggregate	North Kesteven	Limestone
Harmston	Inactive	North Kesteven	Limestone
Castle Quarry, Ancaster (also produces building stone)	Active, but not producing aggregate	South Kesteven	Limestone
South Witham Quarry (East)	Active	South Kesteven	Limestone
South Witham Quarry (West)	Inactive	South Kesteven	Limestone
Creeton (also produces building stone)	Active	South Kesteven	Limestone
Station Quarry, Great Ponton (also produces building stone)	Active	South Kesteven	Limestone
Little Ponton	Active	South Kesteven	Limestone
Colsterworth Triangle	Inactive	South Kesteven	Limestone
Ropsley	Active	South Kesteven	Limestone
Copper Hill, Ancaster (also produces building stone)	Active	South Kesteven	Limestone
Skillington Quarry	Inactive	South Kesteven	Limestone

Figure 4: Crushed rock quarries in Lincolnshire in 2024 (excluding dormant sites)



3.37 It is a long-established practice in Lincolnshire to keep the crushed rock data for limestone and chalk separate. This because there are significant constraints on using chalk as an aggregate, which for many years resulted in it being classed as a 'secondary aggregate'. Due to changes in the definition of that term during the 1990s, chalk was reclassified as a primary aggregate but nevertheless continues to have significant limitations. This was reflected in the agreement of the East Midlands Aggregates Working Party (EMAWP) in 2010 to exclude chalk from Lincolnshire's sub-regional apportionment (SRA) for crushed rock.

Sales of limestone

3.38 In 2024, Lincolnshire's production of limestone (aggregate and non-aggregate) amounted to 1.678mt, of which 1.559mt was for aggregate purposes. Over the 10-year period (2015-2024), average sales of aggregate were 1.179mt per annum (see table 11 below).

Table 11: Sales of limestone extracted in Lincolnshire: 2015-2024

Year	Aggregate sales (mt)	Non aggregate sales (mt)	Total (mt)
2015	0.430	0.190	0.620
2016	0.760	0.270	1.030
2017	0.854	0.125	0.979
2018	1.280	0.140	1.420
2019	1.450	0.090	1.540
2020	1.165	0.140	1.305
2021	1.394	0.166	1.560
2022	1.502	0.059	1.561
2023	1.399	0.113	1.512
2024	1.559	0.119	1.678
Average (2015-2024):	**1.179**	**0.141**	**1.321**
Average (2022-2024):	**1.487**	**0.097**	**1.584**

3.39 Most of the limestone sales are for aggregate purposes, about 93% in 2024 with an average of 89% over the 10-year period: 2015-2024. At 1.179mt per annum, the 10-year average for limestone aggregate sales masks a significant variation in sales over this period, from 0.430mt in 2015 to 1.559mt in 2024.

3.40 The relatively low output of the Lincolnshire limestone as an aggregate when compared to that from other areas reflects the limitations on its uses. Sales of limestone for aggregate purposes from Lincolnshire operations only represents a small proportion of the total crushed rock output in the East Midlands. Even with the recent increase in sales, Lincolnshire's contribution is only an average of 4.0% over the period 2014-23, which is the latest available dataset for the East Midlands (see table 12). The table incorporates data from the East Midlands Aggregates Working Party Annual Monitoring Report 2024 (2023 data).

Table 12: Limestone aggregate sales from Lincolnshire compared to crushed rock aggregate sales in the East Midlands: 2014-2023

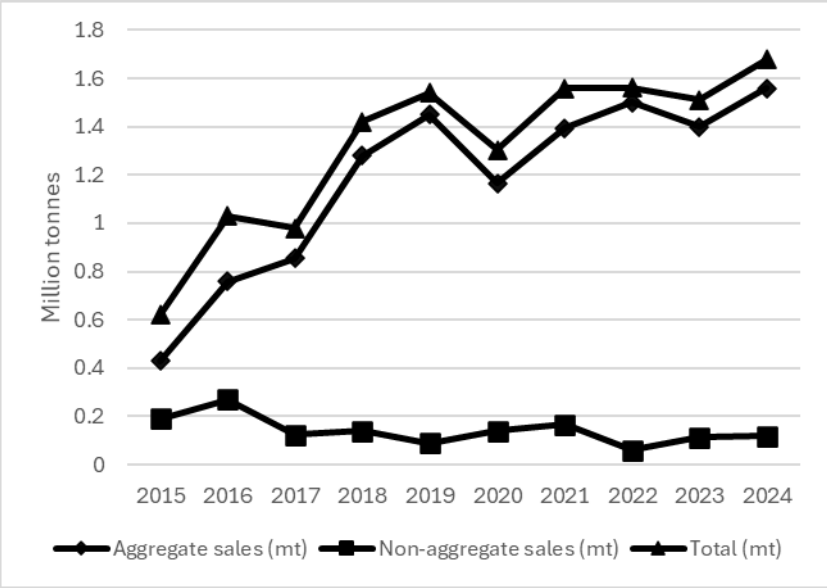
Year	Sales in East Midlands (mt)	Sales in Lincolnshire (mt)	Percentage of regional sales
2014	21.900	0.380	1.7
2015	23.000	0.430	1.9
2016	28.120	0.760	2.7
2017	28.410	0.850	3.0
2018	27.830	1.280	4.6
2019	29.211	1.450	5.0
2020	23.226	1.165	5.0
2021	28.246	1.395	4.9
2022	28.284	1.501	5.3
2023	26.677	1.399	5.2
Average	**26.490**	**1.061**	**4.0**

3.41 As shown in table 11 and on figure 5, Lincolnshire sales of limestone aggregate during the last 10-year period initially climbed sharply, reaching 1.45mt in 2019. A decline was seen in 2020 before sales recovered and have since remained in the region of 1.4-1.5mt per annum, with sales of 1.559mt in 2024 being the highest seen over the past ten years.

3.42 National planning practice guidance on the managed aggregate supply system requires mineral planning authorities to look at

the last three years of sales to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply. During the three-year period (2022-2024), average annual sales of limestone for aggregate amounted to 1.487mt, which is over twice the provision rate set in the Core Strategy Development Management Policies (0.62mt per annum). This is 0.308mt higher than the 10-year average (1.179mt), an increase of around 26%. The most recent three years of sales do not show a consistent upward or downward trend in sales of limestone aggregates, but when viewed in the context of previous years could potentially indicate a broader stabilisation of sales as noted above.

Figure 5: Trends in sales for limestone extracted in Lincolnshire: 2015-2024



Sales of chalk

3.43 Although chalk has very significant limitations as an aggregate, it makes a very modest contribution to the county's output of crushed rock aggregates. It is understood that chalk aggregates extracted in this area largely serve local markets in the east of Lincolnshire, although it may also be the case that some of the markets previously supplied by the county's chalk quarries are now being served by its limestone quarries, which have recently seen a surge in production.

3.44 Since 2009, very little reliable data on chalk sales has been provided by the minerals industry. When it has been provided, given that there are only two active quarries, the data has been classed as confidential.

Landbank of limestone

3.45 The National Planning Policy Framework states that mineral planning authorities should make provision for the maintenance of landbanks of at least 10-years for crushed rock, while longer periods may be appropriate to take account of the locations of permitted reserves relative to markets, and the productive capacity of permitted sites.

3.46 As at 31 December 2024, it is estimated that permitted reserves of limestone for aggregate purposes totalled some 13.479mt in Lincolnshire, excluding dormant sites (Aggregate Minerals Survey 2024 data). Table 13 sets out the landbank of permitted reserves for the county (expressed as the number of years' supply remaining) based on four alternative provision rates:

- Sub-regional apportionment (SRA).
- Core Strategy and Development Management Policies
- Ten-year average annual sales.
- Three-year average annual sales.

3.47 The table shows that at the end of 2024 the landbank of limestone aggregate exceeded 10-years under all but one of the four provision rates. When using the most recent three-year average sales figure, the landbank of limestone aggregate was 9.06 years.

3.48 At the end of 2024, one planning application for an extension to Ropsley Quarry was pending determination, which following amendments, would provide an additional 1.9mt of limestone reserves (including aggregates and non-aggregates). This application was subsequently granted planning permission.

Table 13: Landbank of limestone (aggregate) based on alternative provision rates (as at 31 December 2024)

Permitted reserves as at 31.12.24 (mt)	Annual rate based on SRA (mt)	Landbank based on SRA (years)	Annual rate based on the current adopted plan (mt)	Landbank based on the current adopted plan (years)	Annual rate based on 10 year average sales (mt)	Landbank based on 10 year average sales (years)	Annual rate based on 3 year average sales (mt)	Landbank based on 3 year average sales (years)
13.479	1.1	**12.25**	0.62	**21.74**	1.179	**11.43**	1.487	**9.06**

Landbank of chalk

3.49 Comprehensive and reliable data is not available for permitted reserves of chalk in Lincolnshire. However, it is estimated that, at the end of 2024, overall permitted reserves of chalk for aggregate uses within active and inactive sites were in the region of 1.5 million tonnes. In the absence of sales data, it is not possible to calculate a landbank figure.

3.50 At the end of 2024 there were no pending applications for chalk extraction.

Productive capacity

3.51 As stated previously, individual operator returns for the aggregate surveys are treated as confidential, and production levels and reserve assessments can fluctuate considerably from those set out in original planning applications. Therefore, tables 14 and 15 provide only basic information in respect of planned production levels and end dates for planning permissions for limestone and chalk quarries in the county.

3.52 As table 14 indicates, there are no restrictions on production levels for the vast majority of the limestone quarries in the county. Consequently, should any site close, there are several other sites that can step up production to compensate or to meet increased demand.

3.53 For chalk, it is considered that demand for this low-grade aggregate which has very significant constraints upon its use will be limited. Given that there is no planned provision rate for chalk and the quarries in the county are not subject to output restrictions, there is nothing to suggest there are likely to be any issues regarding productive capacity. However, even if an issue did develop, material could be sourced from one of the county's limestone quarries.

Table 14: Productive capacity: limestone

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
Longwood	Longwood Quarries	Active	200,000	21 February 2042	Information is based on the 2012 ROMP application. Productive capacity is not limited by planning permission.
Brauncewell	Brauncewell Quarries Ltd	Active	200,000	7 January 2044	Information is based on the 2007 application. Productive capacity is not limited by planning permission.
Dunston	Daniel Charles Aggregates Ltd	Active	80,000 to 100,000	Up to 16 May 2052*	Information is based on the 2023 extension application. Productive capacity not limited by planning permission. *Development to cease no later than 25 years from the date of commencement, or when the winning and working of limestone has permanently ceased, whichever is the earlier.
Metheringham Heath	Longwood Quarries Ltd	Active	Not specified	21 February 2042	Information is based on the 2006 application. The quarry operates primarily for building stone, but periodically may produce significant quantities of aggregate. Productive capacity is not limited by planning permission.
Harmston	Harmston Waste Management	Inactive	Not specified	21 February 2042	The site is not expected to recommence extracting limestone.
Castle Quarry (Ancaster)	Goldholme Stone	Active	Not specified	10 December 2049	Information is based on the 2007 application. The site is subject to limitations on vehicle movements. The quarry operates primarily for building stone, but periodically may produce significant quantities of aggregate.
Copper Hill Quarry (Ancaster)	Ancaster Copper Hill Stone	Active	30,000	17 March 2044	Information is based on the 2013 application. Productive capacity is not limited by planning permission.
South Witham (East)	G Webb Haulage Ltd	Active	150,000 to 200,000	29 August 2078	Information is based on the 2017 application. Productive capacity is not limited by planning permission.

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and source of information
South Witham (West)	None	Inactive	Not specified	21 February 2042	Information is based on the 1997 ROMP application.
Creeton	Creeton Quarry Ltd	Active	Not Specified	21 February 2042	Information is based on the 2010 applications. Productive capacity is not limited by planning permission.
Station Quarry, Great Ponton	Harmston Waste Management	Active	100,000	10 October 2055	Information is based on the 2023 extension application. Productive capacity is not limited by planning permission.
Little Ponton	Geo Quarries Ltd	Active	30,000 to 100,000	21 February 2042	Information is based on the 2013 ROMP application. Productive capacity is not limited by planning permission.
Colsterworth Triangle	CESL	Inactive	Not specified	08 June 2066	Information is based on the 2015 application. Productive capacity is not limited by planning permission.
Ropsley	Roplsey Quarry Ltd	Active	300,000 to 400,000	31 December 2033	Information is based on the 2024 extension application (pending in 2024, subsequently granted in May 2025). Productive capacity is not limited by planning permission.
Skillington Quarry	Landowner	Inactive	120,000	21 February 2042	Information is based on the 2018 ROMP application. Productive capacity is not limited by planning permission.
Total (all sites)			**1,450,000+**		**Planned production levels (where specified) exceed the annual provision rate in the Core Strategy and Development Management Policies (0.62Mt) and are very close to the three-year average sales for 2022-24 (1.487Mt).**

Table 15: Productive capacity: chalk

Site	Operator	Current status	Planned production level (tonnes per annum)	Planning permission end date	Comment and Source of Information
South Thoresby	GBM	Active	Unknown	27 November 2052	Productive capacity is not limited by planning permission.
Highfield Quarry (Welton le Marsh)	Welton Aggregates Ltd	Active	170,000	31 December 2032	Information is based on the 2024 extension application. Productive capacity is not limited by planning permission.
Nettleton Bottom	Able UK Ltd	Inactive	Unknown	21 February 2042	Information is based on the 2014 ROMP application. Productive capacity is not limited by planning permission.
Total (all sites)			**Unknown**		**There is no planned provision rate for chalk.**

Exports and imports of crushed rock

3.54 Details of the flow of aggregates into and out of the county are provided through the national Aggregate Mineral Surveys carried out generally every four years. The most recent national Aggregate Minerals Survey undertaken relates to the period 1 January to 31 December 2023. Other recent national surveys include those carried out for the years 2019 (postponed from 2018), 2014 and 2009, with more limited information provided by the East Midlands annual survey carried out in 2018. The results of these surveys with respect to the destinations of crushed rock extracted in the county are summarised in table 16. Unlike the national surveys, the 2018 data includes sales of limestone for non-aggregate purposes. However, as this represented less than 10% of total sales, it is only likely to have had a limited impact on the distribution data.

3.55 The data for 2009 is less complete than for the other years with 119,017 tonnes of limestone going to unspecified destinations. Whilst this places some constraints on the interpretation of the data, table 16 appears to indicate that there were no substantial changes between this survey and the 2014 survey. In contrast, the 2018, 2019 and 2023 surveys show consistently higher sales of Lincolnshire limestone with greater amounts being exported to other areas. Whilst for 2019 some destinations are masked by over 0.5mt of limestone being reported as sent to "East Midlands Unknown", it may be assumed a similar destination for sales profile to 2018 has continued. The most recent 2023 survey results in particular evidence a significant increase in exports of limestone crushed rock from Lincolnshire, with only 44.6% of limestone aggregate being sold within the county. The remaining majority was exported to a large number of locations. The East of England accounted for a substantial amount of these exports, with sales to this region making up 34.7% of Lincolnshire's total sales. In particular, Cambridgeshire and Peterborough and Norfolk accounted for 20.1% and 9.7% of total sales respectively. 5.1% of total sales were also exported to several sub regions within the West Midlands region.

3.56 Imports of crushed rock into Lincolnshire totalled 317,000 tonnes in 2009, which rose to 446,000 tonnes in 2014. Lincolnshire was therefore a net importer of crushed rock in both years, but with a higher amount (398,000 tonnes) in 2014. In 2019, imports of crushed rock into Lincolnshire increased again to 512,000[9]. This was, however, offset by the significant rise in exports to other areas, but due to the amount of limestone being reported as sent to "East Midlands Unknown" in 2019, it is not clear whether Lincolnshire was a net exporter of crushed rock at this point. In 2023, 466,000 tonnes of crushed rock aggregates were imported into Lincolnshire, making the county a net exporter by around 309,000 tonnes. These figures should however be treated with some caution given that over 0.75mt of imports into the East Midlands in 2023 were reported to unknown destinations within the region.

3.57 Detailed information in relation to the source of imports is not reported in the national Aggregate Mineral Surveys. However, summary information in the form of broad percentage bands were collated from the 2023 survey and provided to aggregate working parties in each region to facilitate compilation of Local Aggregate Assessments and aid understanding of flow patterns. Table 17

[9] Collation of the results of the 2019 Aggregate Minerals Survey for England and Wales, MHCLG, 2021

illustrates the sources of crushed rock aggregate consumed in Lincolnshire in 2023.

3.58 The crushed rock produced in Lincolnshire is of a relatively low strength and with poor resistance to frost damage. As such, it is generally only suitable for use as construction fill or sub-base material. The recent upturn in sales of crushed Lincolnshire limestone indicates an increased demand for this material for less demanding applications.

3.59 Higher quality crushed rock suitable for road surfacing or for concrete production needs to be imported into Lincolnshire. Historically, this has been sourced principally from higher specification geological deposits, particularly in Leicestershire and Derbyshire. It is likely that Lincolnshire will continue to rely on imported, higher quality crushed rock where it is needed to supply projects in the county. The above mineral planning authorities have not identified any supply issues for crushed rock in their most recent local aggregate assessments.

3.60 Despite its limitations, sales of crushed limestone extracted in Lincolnshire have risen significantly in recent years indicating an increased demand for this material from both within the county and from adjoining areas for use in less demanding applications.

Table 16: Destination of crushed rock sales from Lincolnshire in 2009, 2014, 2018 (including 141,132 tonnes of non-aggregate), 2019 and 2023

Destination by region	Destination by sub region*	2009 sales (tonnes)^	2009 sales (%)	2014 sales (tonnes)	2014 sales (%)	2018 sales (tonnes)	2018 sales (%)	2019 sales (tonnes)	2019 sales (%)	2023 sales (tonnes)	2023 sales (%)
East Midlands	Lincolnshire	323,149	64.5	328,862	87.2	925,525	65.1	756,748	52.4	624,375	44.6
East Midlands	Derbyshire and PDNPA	-	-	-	-	9,000	0.6	-	-	43,736	3.1
East Midlands	Nottinghamshire	-	-	-	-	60,073	4.2	1,195	0.1	59,269	4.2
East Midlands	Leicestershire and Rutland	5,000	1.0	44,896	11.9	89,000	6.3	3,521	0.2	49,948	3.6
East Midlands	Northamptonshire	-	-	-	-	39,022	2.7	1,128	0.1	40,202	2.9
East Midlands	East Midlands (Unknown)	40,000	8.0	-	-	164,000	11.5	535,771	37.1	21,486	1.5
East Midlands	**All sub-regions**	**368,149**	**73.5**	**373,758**	**99.1**	**1,286,620**	**90.5**	**1,298,363**	**89.9**	**839,016**	**60.0**
East of England	Bedfordshire	-	-	-	-	25,000	1.8	994	0.1	35,018	2.5
East of England	Cambridgeshire and Peterborough	-	-	-	-	64,599	4.5	17,968	1.2	281,666	20.1
East of England	Hertfordshire									1,022	0.1
East of England	Norfolk									135,701	9.7
East of England	Suffolk									8,021	0.6
East of England	East of England - Unknown	5,000	1.0	-	-	-	-	84,507	5.9	24,486	1.7
East of England	**All sub-regions**	**5,000**	**1.0**	**-**	**-**	**89,599**	**6.3**	**103,469**	**7.2**	**485,914**	**34.7**

Destination by region	Destination by sub region*	2009 sales (tonnes)^	2009 sales (%)	2014 sales (tonnes)	2014 sales (%)	2018 sales (tonnes)	2018 sales (%)	2019 sales (tonnes)	2019 sales (%)	2023 sales (tonnes)	2023 sales (%)
Yorkshire and Humberside	**All sub-regions**	**-**	**-**	**-**	**-**	**45,000**	**3.2**	**-**		**2,137**	**0.2**
West Midlands	**All sub-regions**									**71,541**	**5.1**
Greater London and the South East	**All sub-regions**	**-**	**-**	**-**	**-**	**-**	**-**	**42,252**	**2.9**	**802**	**0.1**
Other (total sales)	**All sub-regions**	**8,787**	**1.8**	**-**	**-**	**26**	**0.0**	**455**	**0.0**	**-**	**-**
Unknown	Unknown	119,017	23.8	3,433	0.9	-	-	-	-	-	-
All destinations	**All sub-regions**	**500,953**	**100.0**	**377,191**	**100.0**	**1,421,245**	**100.0**	**1,444,539**	**100.0**	**1,399,410**	**100.0**

* The absence of sales figures for an individual sub-region in any given year does not necessarily indicate that there were nil sales to these destinations. Previous sales may have been included in other categories such as 'Other (total sales)' given their limited scale. Additional sub regions have been added to this table over time to reflect and identify the increasing number of export destinations for significant amounts of Lincolnshire's crushed rock aggregate.

^ The sales data in the East Midlands Aggregate Working Party report included a late return from an operator that was inadvertently not included in the distribution data of that report but has been included in this table under "Unknown". The distribution data for 2009 also includes a small quantity of chalk.

Table 17: Sources of crushed rock aggregate consumed in Lincolnshire in 2023

Source of crushed rock aggregate	Percentage band of consumption
Norfolk	<1%
Derbyshire	1-10%
Leicestershire	1-10%
Lincolnshire	60-70%
North Northamptonshire	1-10%
Peak District National Park	<1%
Rutland	1-10%
Shropshire	<1%
Doncaster	10-20%
North Lincolnshire	1-10%

4. Recycled and secondary aggregate

4.1 Alternatives to primary aggregates include: recycled aggregates, which come from the reprocessing of materials that have previously been used in construction; and secondary aggregates, which are by-products of either mining operations (such as colliery spoil) or industrial processes.

4.2 Despite difficulties in obtaining reliable data, the last National and Regional Guidelines for aggregates provision set figures for 'alternative aggregates' (aggregate materials other than land or marine won) which regions should aim to achieve. Although now considerably out of date, the last guidelines proposed that the East Midlands provided some 110mt of alternative aggregates for the period 2005 –2020.

4.3 Several national surveys have been conducted to measure and gain an understanding of the extent to which recycled and secondary materials have been used. The most recent study, undertaken by Capita Symonds for 2005 arisings, published in February 2007, is now considerably out of date[10].

4.4 The availability and robustness of data relating to recycled and secondary aggregate at the local level is limited. Attempts have been made through the annual mineral surveys co-ordinated by the East Midlands Aggregates Working Party to obtain information on the use of secondary and recycled aggregates; however, the response rates and information received has been severely limited. The broader national Aggregate Minerals Survey, most recently undertaken in 2023, did not specifically seek information on recycled and secondary aggregates as this falls outside of the remit of the national survey.

Recycled aggregate

4.5 Recycled aggregates are produced through the processing of construction, demolition and excavation (CD&E) waste. This waste arises from the construction and demolition industries, including excavation during construction activities, and is made up of mainly inert materials such as soil, stone, concrete, brick and tile. Construction and demolition waste is generally suitable for a high level of treatment and recycling, while excavation waste is mainly soil and sub-soils that are managed differently.

4.6 Waste arising from the construction and demolition industries is difficult to measure for two reasons:

a. due to the weight and transport costs associated with this waste stream, significant quantities of materials are recycled and re-used on site where they arise and, therefore, do not enter the recorded waste stream; and

b. a proportion of CD&E waste is removed to be managed or incorporated into development at sites where the waste activity is considered to be low risk and therefore exempt from the environmental permitting system.

This means that data is only available for the rest of the material which is managed through permitted waste facilities. As a result, the estimates made are at best the minimum quantity of waste arisings

[10] Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 (Department for Communities and Local Government, 2007)

and reflect the quantity of waste managed off-site in facilities that require planning permission and environmental permits.

4.7 The Lincolnshire Waste Needs Assessment, produced in 2021 to support the updating of the Lincolnshire Minerals and Waste Local Plan, estimated that, in 2019, Lincolnshire's total CD&E waste arisings were around 900,000 tonnes, of which up to 212,500 tonnes were estimated to be converted into recycled aggregate at sites within the county. Operational capacity for recycled aggregate production within the county was estimated to be around 742,500 tonnes per annum. Projections set out in the 2021 Waste Needs Assessment indicated that there will be sufficient aggregates recycling capacity in the county to meet projected needs up to 2045 and beyond.

4.8 Subsequent local aggregate assessments have sought to provide updated information regarding sites that are known to be capable of producing recycled aggregates, and updated estimates for the amount of recycled aggregates produced in Lincolnshire. The Lincolnshire LAA published in July 2023 estimated that maximum dedicated CD&E recycling capacity in Lincolnshire in 2021 was around 1,244,944 tonnes per annum. Additional capacity was also identified at mixed waste and transfer sites. Using Environment Agency Waste Data Interrogator data to identify appropriate feedstocks, it was estimated that a combined total of 278,005 tonnes of material suitable to produce recycled aggregate was recovered from Lincolnshire waste sites in 2021.

4.9 A comprehensive update to the Lincolnshire Waste Needs Assessment is currently being undertaken. This work will provide an up-to-date position in relation to secondary and recycled aggregates and future local aggregate assessments will be updated to reflect the outcome of this work once it has been completed.

4.10 The general trend in waste management will be decreasing disposals of CD&E waste to landfills, quarry restoration and exempt facilities, with an increasing amount recycled to aggregate, especially through on-site recycling. This will lead to a greater provision of recycled aggregate, which in turn will assist us in working towards future recycled aggregate production targets, and achieving a reduction in the demand for primary aggregate.

Secondary aggregate

4.11 The energy from waste plant at North Hykeham exports incinerator bottom ash for recycling into aggregates.

5. Marine won aggregates

5.1 The marine aggregates industry makes a significant contribution to the demand for sand and gravel in England and Wales. This aggregate is predominantly supplied to the Southeast of England and London, with a significant proportion also exported to Europe. In 2024 there were estimated permitted national primary reserves of 386Mt, providing a 22-year life at 10-year average extraction rates. Almost all of the offshore sand and gravel reserves are owned by the Crown Estate which awards commercial agreements to mineral operators for extraction.

5.2 The National and Regional Guidelines for Aggregates Provision (2005 to 2020) assumed marine aggregates will not contribute to meeting demand in the East Midlands region. However, the coast off Lincolnshire is within the Humber dredging area, which in 2024 had primary reserves totalling 36.76Mt. Current estimates suggest these reserves could last around 13 years based upon 10-year average extraction rates. There were 10 dredging licences in place in this area, and five subject to current applications. In 2024, 3.32Mt of primary aggregates were extracted from the Humber dredging area[11].

5.3 Of the 3.32Mt of primary aggregate extracted in 2024, 69.4% was exported to mainland Europe, 26.4% was delivered to wharves in the Humber and North East dredging areas, and 4.2% to the Thames Estuary. Locally, the 2024 figures for total landings of material to River Humber wharves were around 0.23Mt. These wharves are not however located within the county of Lincolnshire.

5.4 The lack of materials landed at Lincolnshire wharves has previously been interpreted as a consequence of limited landing opportunities for marine aggregates in the county. Navigable wharfage in Lincolnshire is limited to Boston, and while there are wharfs at Gainsborough, Sutton Bridge and Fossdyke they are not equipped for landing marine aggregates nor do they have associated railheads. It is considered that the lack of direct access to larger urban markets and limited demand in the Lincolnshire area, which can already be met by existing resources, is a limiting factor for local growth in the marine aggregates sector.

5.5 Whilst marine aggregates have not been part of the aggregate supply to Lincolnshire, they have been used for coastal defence works in the county for many years. In 2024, 0.65Mt of aggregate was extracted from the Humber dredging area for beach nourishment purposes. The same quantity was landed as part of the 'Lincshore' beach nourishment project, a major annual scheme to replenish beaches along the Lincolnshire coastline to reduce flood risk and protect homes and businesses.

5.6 It is expected that the situation described above will continue. The County Council is therefore not expecting marine aggregate to make a contribution to supply options in the area or to be landed in the county at the present time. However, it is recognised that there will be continued activity off the coast of Lincolnshire with the sand and gravel transported to other areas both in the UK and abroad to make a contribution to their aggregate supply.

[11] Marine Aggregates Summary of Statistics 2024 (The Crown Estate)

6. Local considerations and future demand

6.1 When looking ahead at possible future demand, the National Planning Practice Guidance states that local aggregate assessments must consider other relevant local information in addition to the 10-year rolling supply. This section therefore considers the factors that may influence the demand for aggregate. Section 7 then sets out the approach we will take to calculating the level of provision that needs to be made to meet the anticipated demand.

Population projections

6.2 In 2024, Lincolnshire had a population of 789,502 people dispersed across the county (mid-2024 estimate, Office for National Statistics). This is projected to rise to about 850,915 people by mid-2042, an increase of approximately 7.8% over this period (based on the latest (2022-based) population projections for local authorities[12]).

Housing provision and completions

6.3 Practice Guidance on the Production and Use of Local Aggregate Assessments recommends comparing planned levels of housing provision with housing completions over the previous ten years to provide an indication of relative scale, which will have potential implications for aggregate supply and demand[13]. In terms of the previous provision, table 18 sets out the net additional dwellings (the absolute change in dwelling stock) that were completed in Lincolnshire and in each district over the 10-year period (from 2014-15 to 2023-24). The data is taken from Table 122 of the government's live tables on housing supply relating to net additional dwellings[14].

[12] www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections

[13] Practice Guidance on the Production and Use of Local Aggregate Assessments, Planning Officers' Society and Mineral Products Association (December 2016)

[14] www.gov.uk/government/statistical-data-sets/live-tables-on-net-supply-of-housing

Table 18: Housing supply - net additional dwellings in Lincolnshire and each district over the 10-year period (2014-15 to 2023-24)*

Administrative area	2014 15	2015 16	2016 17	2017 18	2018 19	2019 20	2020 21	2021 22	2022 23	2023 24	Average
Boston	109	180	351	394	429	324	294	318	346	286	303
East Lindsey	491	323	348	471	481	532	454	570	531	531	473
Lincoln	166	133	130	265	366	220	171	150	158	135	189
North Kesteven	443	472	489	578	693	760	487	469	773	703	587
South Holland	255	293	266	296	828	517	571	667	726	648	507
South Kesteven	645	495	478	428	676	729	446	485	642	575	560
West Lindsey	387	328	305	259	408	572	482	589	681	608	462
Total for Lincolnshire	**2,496**	**2,224**	**2,367**	**2,691**	**3,881**	**3,654**	**2,905**	**3,248**	**3,857**	**3,486**	**3,081**

*Pre-2021 figures do not include subsequent revisions made as a result of dwelling counts from the 2021 census.

6.4 The current situation with respect to planned housing provision in Lincolnshire is as follows:

a. A joint local plan covering the local authority areas of the City of Lincoln, North Kesteven and West Lindsey (known as the 'Central Lincolnshire Local Plan') was adopted in April 2023. This sets a housing target of 1,325 dwellings (net) per annum over the plan period up to 2040.

b. The East Lindsey Local Plan is in two parts: a Core Strategy and a Settlement Proposals Document. The Core Strategy (adopted in July 2018) sets out a target of 7,819 net dwellings over the plan period (2017-2031). This equates to 558 dwellings per annum. The plan is currently subject to a partial update with consultation on the initial Issues and Options stage carried out in 2021/2022.

c. The South Kesteven Local Plan (adopted in 2020) sets out a target to build 16,125 homes over the plan period (2011 to 2036) at an average of 650 homes per annum. An update of the plan is under way with consultation on a Draft Local Plan taking place in February-April 2024. The draft plan proposed a minimum requirement of 701 dwellings per annum from 2021 to 2041. A further consultation in July-August 2025 on 'Proposed Housing and Mixed-Use Site Allocations' identified an increased requirement of 886 dwellings per annum.

d. A joint local plan covering the district councils of Boston and South Holland (known as the 'South East Lincolnshire Local Plan') was adopted in 2019. This sets out a target to build 310 new homes per annum in Boston and 467 new homes in South Holland over the period from 2011 to 2036.

6.5 In total, the provision made through adopted local plans amounts to 3,310 (net) dwellings per annum for Lincolnshire. Table 19 compares the average annual levels of housing supply over the past 10-years with the planned annual levels of housing provision in adopted local plans.

Table 19: Comparison of the average annual net additions to housing stock over the past 10-years with planned net housing provision in Lincolnshire

Average annual net additions to housing stock 2014/2015 2023/2024 (A)	Planned net housing provision in adopted Local Plans (average per annum) (B)	Percentage increase in net housing delivery (A) required to meet planned housing provision (B)
3,081	3,310	7.4%

6.6 Table 19 illustrates that the annual level of planned housing provision set out in adopted local plans is higher than the average levels of net additional dwellings achieved in the previous 10-year period. For the county as a whole, this amounts to an increase of around 7.4% in housing delivery that will be required to achieve current plan provision levels. This figure should be regarded as a conservative estimate when considering that several local plans are in the process of being reviewed and updated, and when having regard to national priorities to increase housebuilding including associated changes in December 2024 to the standard method for assessing local housing need[15].

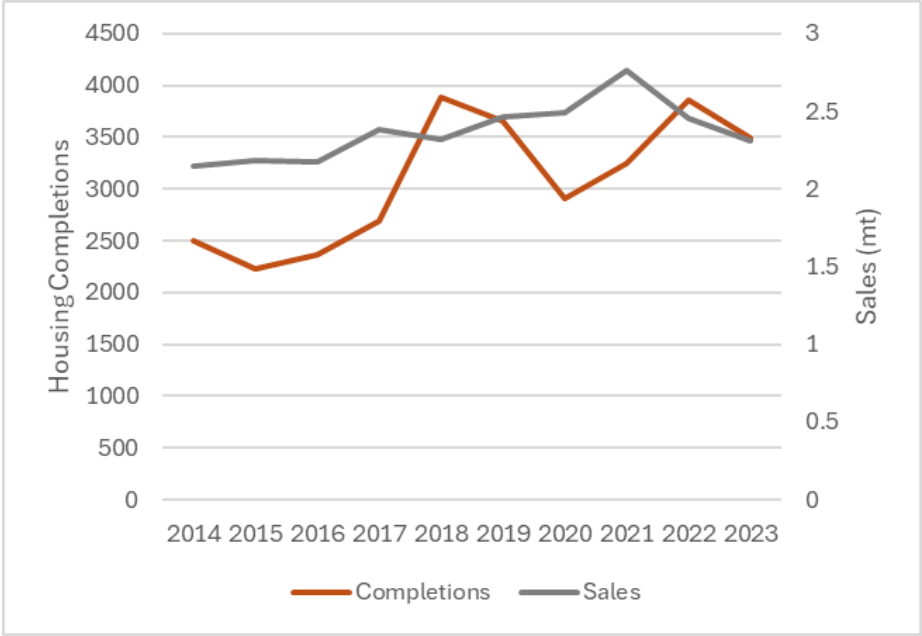
[15] National Planning Policy Framework – December 2024 (MHCLG)

6.7 However, table 18 shows that with the exception of 2020-21 (which was likely affected by the covid-19 pandemic), over the last six years, the annual net additional dwellings in Lincolnshire have been close to or have exceeded the overall levels of planned housing provision set out in adopted local plans. Therefore, much of the demand associated with the projected increase in housing delivery is likely already being accommodated in existing aggregates supply.

6.8 The Minerals Products Association estimates that a typical house uses up to 200 tonnes of aggregates in its construction suggesting there should be a clear correlation between aggregate production and housebuilding[16]. In practice, however, figure 6 shows that a strong correlation between sales of sand and gravel and housing completions in Lincolnshire does not exist i.e. the peaks and troughs of house building over the ten-year period 2014 to 2023 does not correlate closely with the steady growth and then decline in sales of sand and gravel over the same period.

6.9 Furthermore, given that a growing proportion of the sand and gravel sales have been exported out of the county in recent years, the correlation is likely to be even weaker than the graph suggests. As a result, it is considered that this is not a reliable method for forecasting future demand for sand and gravel. The situation will, however, continue to be monitored on an annual basis through the local aggregates assessment and subsequent plan reviews.

Figure 6: Comparison of sand and gravel sales with housing completions in Lincolnshire: 2014 – 2023



Economic conditions

6.10 A recent report produced by the Mineral Products Association provides some insight into the performance of the aggregates and construction markets nationally and within the East Midlands region[17]. The report notes that the UK economy stagnated in 2023, hampered by high costs and interest rates, and that mineral products sales will fall substantially in 2024, but anticipates a

[16] Profile of the UK Mineral Products Industry – 2023 Edition (MPA)

[17] Regional overview of construction and mineral products markets in Great Britain' (2024 edition)

recovery in construction demand for mineral products from 2025 onwards, following three years of decline.

6.11 In relation to the East Midlands, whilst construction output in 2023 increased by 11.7% compared to 2022, sales volumes of mineral products declined significantly year on year. Annual average construction output growth over 2024-28 for the East Midlands is forecast at 1.9% per annum.

6.12 More recent data on national sales volumes is provided by the Quarterly Sales Volumes Survey and associated press releases published by the Mineral Products Association[18]. The results of this survey show that year-on-year sales volumes of all major mineral products declined in 2024 as anticipated, continuing the trends seen in 2023. Data for the first two quarters of 2025 (the latest available at the time of publication) show a similar picture emerging, indicating that market conditions remain incredibly challenging for the mineral products sector.

Infrastructure

6.13 There are a number of ongoing and emerging infrastructure projects in Lincolnshire which have the potential to affect demand for aggregates including the following major road improvements:

i. Grantham Southern Relief Road (a new relief road, bridge and connections that will facilitate a major sustainable urban extension) is currently under construction.

ii. North Hykeham Relief Road - which will link the Lincoln Eastern Bypass with the existing western bypass to create a ring road. The project will also form part of Lincolnshire's coastal highway, due to start in 2025.

iii. Spalding Western Relief Road, which commenced in July 2020 to provide a new route around the west of the town, linking the A1175 and A16 (to the south and east of Spalding) to the B1356 (to the north), via the B1172 Spalding Common. This work will also incorporate two road bridges spanning the Lincoln to Peterborough railway line.

6.14 Local Plans produced by district councils in Lincolnshire are supported by infrastructure delivery plans. These set out the necessary infrastructure such as transportation, education, healthcare and utilities that is needed to help the county grow. The delivery of projects will be monitored in terms of their potential impacts on aggregates consumption as they progress.

Nationally Significant Infrastructure Projects

6.15 In recent years, a significant number of 'Nationally Significant Infrastructure Projects' (NSIPs) have been proposed in Lincolnshire. These are large-scale infrastructure projects, such as those involving power generation, energy transmission and transport infrastructure, deemed to be of national importance and are dealt with under the Planning Act 2008. Table 20 identifies the proposed NSIPs within Lincolnshire's administrative boundaries, as of October 2025.

6.16 In addition to the projects listed in table 20, there are also many other Nationally Significant Infrastructure Projects that are in close

[18] https://www.mineralproducts.org/

proximity within adjacent authorities. Examples of these include (but are not limited to):

- A46 Newark Bypass – Development Consent Order granted October 2025
- Steeple Renewables Project (solar farm and battery storage) Nottinghamshire – pre examination stage
- Stallingborough Combined Cycle Gas Turbine generating plant and Carbon Capture Plant – pre application stage
- Fens Reservoir Project – pre application stage.

6.17 Other emerging large scale infrastructure projects include the proposed Spherical Tokamak for Energy Production (STEP) prototype fusion energy plant at West Burton in Nottinghamshire, adjacent to the Lincolnshire boundary, with construction planned in the 2030s.

6.18 The significant scale and number of infrastructure projects being proposed within and adjacent to Lincolnshire could lead to an increase in demand for aggregates in the county, however the potential sources, quantities and types of minerals that may be required along with associated timescales are unclear at present. Progress on these projects, many of which are either at an early pre-application stage with proposals yet to be finalised, or are yet to commence construction, will continue to be monitored in future local aggregate assessments as more details become available.

Table 20: Nationally Significant Infrastructure Projects within Lincolnshire – October 2025

Site	Proposal	District	Status (October 2025)
Mallard Pass Solar Farm	Proposed solar photovoltaic array and electrical storage and connection infrastructure with a generating capacity of 350MW	South Kesteven	Decided Development Consent Order (DCO) granted by Secretary of State
Cottam Solar Farm	Proposed 600MW solar Farm comprising of four electricity generating stations, ground mounted solar arrays and associated development including energy storage and grid connection infrastructure	West Lindsey	Decided DCO granted
Boston Alternative Energy Facility - Riverside Industrial Estate	EfW facility with light weight aggregates facility, wharf, waste reception and storage facility and grid connection	Boston	Decided. DCO granted
Gate Burton solar farm	Proposed 500MW solar park, comprising of ground mounted solar photovoltaic panels, on site energy storage facilities and grid connection infrastructure	West Lindsey	Decided DCO granted
West Burton Solar Farm	Proposed 480MW solar farm comprising of four electricity generating stations, ground mounted solar arrays and associated development including energy storage and grid connection infrastructure	West Lindsey	Decided DCO granted
Viking Carbon Capture Storage (CCS) - Immingham to Theddlethorpe	Onshore underground carbon capture pipeline and storage. Pipeline approx. 55km in length	East Lindsey	Decided DCO granted
Heckington Fen Solar Farm	Proposed solar photovoltaic electricity generating facility with a 500MW capacity together with energy storage	North Kesteven	Decided DCO granted
The Outer Dowsing Offshore Wind Project	Underground cable route Mablethorpe to Bicker Fen. Offshore wind farm and associated offshore and onshore infrastructure	East Lindsey Boston South Holland	Decision stage extended Due 10/02/26

Site	Proposal	District	Status (October 2025)
Tillbridge Solar	Generating station with an anticipated capacity in excess of 50MW, comprising of ground mounted solar arrays, energy storage and grid connection infrastructure	West Lindsey	Decided DCO Granted
Springwell Solar Farm	Proposed new solar farm with battery storage and supporting grid connection infrastructure with a generating capacity in excess of 50MW	North Kesteven	Recommendation stage
Lincolnshire Reservoir	Proposed Reservoir exceeding 30 million cubic metres of water storage, together with associated development including water transfer pipelines, abstraction facilities, pumping stations, treatment works, renewable energy generation, access roads, parking, wildlife and environmental areas, leisure and recreational and education facilities.	North Kesteven	Pre Application
Beacon Fen Energy Park	600 MW Solar farm and battery Storage, comprising of ground mounted solar arrays, an on-site substation and electrical connection	North Kesteven	Examination
Fosse Green Energy	350MW Solar Farm and Energy park, comprising of ground mounted solar photovoltaic panels, associated electrical equipment, cabling and on-site energy storage facilities together with grid connection infrastructure	North Kesteven	Pre Examination
One Earth Solar	740MW solar farm and battery storage. Comprising of a ground mounted solar array and battery energy storage system. Cross boundary with Nottinghamshire.	West Lindsey	Examination
Meridian Solar	Solar Photovoltaic array and electrical battery storage generating facility with a generating capacity of up to 750MW.	South Holland	Pre application
National Grid upgrade scheme - Grimsby to Walpole	Overhead Powerlines and substations. 140km long 400kv overhead line with 5 new substations.	South Holland Boston East Lindsey	Pre application
National Grid	EGL3 – comprises of a converter station and associated development	South Holland Boston East Lindsey	Pre application

Site	Proposal	District	Status (October 2025)
Eastern Green Link 3 and Eastern Green Link 4	EGL4 – comprises of a converter station and associated development. Both include underground cabling routes.		
Ossian Offshore Wind	Cable corridor to connect to offshore wind	East Lindsey Boston South Holland	Pre application
Theddlethorpe Flexible Generation	Flexible generation and battery energy storage. Generating capacity up to 1.5GW	East Lindsey	Pre-application
Leoda Solar	Ground-mounted solar electricity generating station with a targeted gross output of 500 to 600 Megawatts (MW) and associated grid connection infrastructure	North Kesteven	Pre-application
Eastern Green Link 5	National Grid Electricity Transmission infrastructure. Primarily high voltage electricity link between Scotland and England with associated onshore infrastructure. Links to Lincolnshire Connection Substation B (part of Grimsby to Walpole project)	East Lindsey	Pre-application
Weston Marsh to East Leicestershire	National Grid Electricity Transmission infrastructure from Weston Marsh to East Leicestershire	South Holland South Kesteven	Pre-application
Kilnside Solar	Kilnside is a proposed 400MW solar farm with battery storage located to the northwest of Great Casterton in Rutland. The cable route will run through Lincolnshire.	South Kesteven	Pre-application

Future demand from other mineral planning authorities

Sand and gravel

6.19 As set out in section 3, exports of sand and gravel increased significantly between 2009 and 2023, particularly to counties across the East Midlands and to the adjoining areas of Cambridgeshire and Peterborough in the East of England. Many of these areas have their own indigenous supplies of sand and gravel, and the local aggregate assessments of adjoining mineral planning authorities do not specifically state that Lincolnshire will need to make a higher level of provision of sand and gravel available for export in the future.

6.20 It is acknowledged that resources in some mineral planning authorities within the East Midlands and beyond are becoming more limited, with local aggregate assessments (reporting 2023 data) for both Northamptonshire and Leicestershire suggesting

that if sites do not come forward in these areas, there will be some reliance on imports of sand and gravel from neighbouring authorities. The extent of any potential impacts on future demand for sand and gravel from Lincolnshire is, however, unclear and will depend on any future shortfalls that may develop and the amounts supplied by other mineral planning authorities.

6.21 Within Yorkshire and Humberside, the neighbouring authority of North Lincolnshire is in the process of updating its local plan and in an 'Initial Engagement and Call for Sites' exercise in 2025, it identified a shortage of aggregate sand and gravel supply to meet North Lincolnshire's needs over their Plan Period. As the plan is still at an early stage, it is not yet clear to what degree North Lincolnshire may be able to meet their future requirements (and therefore whether any materials would be required from other areas).

6.22 The Doncaster and Rotherham Local Aggregates Assessment (reporting 2023 data) notes that Doncaster and Rotherham, and South Yorkshire as a whole, is (and will remain) reliant on imports of sand and gravel from other areas to meet development needs, including from Nottinghamshire, Lincolnshire and the East Riding. However, the amount that may be required from Lincolnshire, and potential impacts on future demand, is not clear and will depend on the amounts supplied by other mineral planning authorities, in particular those which are closer to South Yorkshire.

Crushed rock

6.23 Despite its limitations, recent sales data illustrates a significant increase in exports of limestone crushed rock from Lincolnshire to several areas. In addition to adjoining authorities in the East Midlands, particularly significant amounts were exported to Cambridgeshire and Peterborough and Norfolk in 2023. It is understood that these areas have limited resources suitable for crushed rock and are therefore reliant on imports, although the most recent local aggregate assessments for these authorities do not specifically identify a need for crushed rock from Lincolnshire.

6.24 It is clear that there has been an increased demand for this material from both within the county and from adjoining areas which may have more limited indigenous resources. The extent to which this trend may continue is unclear and will likely depend on market factors and the amounts supplied by other mineral planning authorities.

6.25 Cross boundary movements of minerals and any associated implications for demand and supply will continue to be monitored closely in future local aggregate assessments. Changes in trends and sales to other areas over time will also be reflected in aggregates sales and destinations data and will therefore be accounted for as part of future provision calculations.

7. Calculating aggregate provision and landbanks

7.1 Whilst the considerations set out above could affect the future demand for aggregate, for the reasons and uncertainties outlined, it is incredibly difficult to accurately quantify what this impact could be. Any such changes in demand could also impact on sand and gravel very differently from crushed rock.

7.2 For sand and gravel aggregate, there are good reasons why overall demand may not rise significantly in Lincolnshire:

i. Firstly, attempts to link the future demand for sand and gravel with planned housing provision have proved unreliable. Figure 6 comparing housing completions and sand and gravel sales data demonstrates, for example, that there is little correlation between these two variables.

ii. There is evidence set out in section 3 of this report that internal consumption of sand and gravel within Lincolnshire has seen some growth, but is still a long way from the sales seen in 2009. It should, however, be acknowledged that increased sales in more recent years have largely been driven by a greater quantity being exported to counties with their own indigenous supplies. So, this situation is likely to be resolved as markets improve and sites which have been "mothballed" in those areas come back into production.

iii. Recent trends during the last three years show a decline in overall sales, and the 3-year sales average is marginally lower than the overall 10 year sales average. The 10-year average sales for Lincolnshire is also still closely aligned to the annual provision rate set out in the Core Strategy and Development Management Policies.

iv. The recent sales data continues to reinforce the view of the East Midlands Aggregates Working Party that the sub-regional apportionments are out-of-date and should not be used as a basis for calculating landbanks.

v. The current challenging economic environment is likely to continue to have a direct effect on the overall consumption of aggregates.

7.3 On this basis, it is considered that the **future provision rate for calculating the landbanks for sand and gravel should continue to be based on the average of the last 10-years (2015-2024) of sales** (see table 4).

7.4 For crushed rock (limestone) aggregate the situation is very different: sales have increased significantly over the last ten years. The three-year average (2022-2024) is 1.487mt, which is over twice the provision rate set in the Core Strategy and Development Management Policies (0.62mt per annum). This is also 0.308mt higher than the 10-year average (1.179mt), an increase of around 26%. Sales at this level have not been seen since before the commencement of the last recession in 2007, with current sales significantly exceeding that established in the SRA (1.1mt).

7.5 Sales of Lincolnshire limestone have historically been quite volatile and have been more sensitive to the economic conditions than sales of sand and gravel. This is probably due to the fact that it has limitations as an aggregate which resulted in sales being disproportionately hit during times of recession – perhaps because demand for lower grade aggregates could more readily be met from alternatives such as recycled aggregates.

7.6 Notwithstanding these limitations, Lincolnshire limestone aggregate demand has risen sharply in recent years and remains high, which may be associated with materials being sourced for lower specification applications in infrastructure projects and short-term highways projects. There has been a marked increase in the volume and destinations for exports of limestone in addition to increased indigenous consumption, suggesting there may be a more sustained growth in demand for Lincolnshire limestone products overall.

7.7 Lincolnshire imports significant quantities of high-grade crushed rock aggregate, so it is important that sufficient reserves of Lincolnshire Limestone are made available to ensure that this lower grade aggregate is used for meeting less demanding applications, thereby helping to conserve reserves of higher grade crushed rock currently imported into the plan area.

7.8 It is clear that there has been a sustained increased demand for limestone crushed rock from both within the county and in particular from adjoining areas which may have more limited indigenous resources. As set out in section 3, the most recent three years of sales data do not show a consistent upward or downward trend in sales of limestone aggregates but could potentially indicate a broader stabilisation of sales. At this time, it is therefore considered appropriate to continue using a provision figure derived from more recent sales data rather than an average of the past 10-years sales.

7.9 As such, it is considered that the **future provision rate for calculating the landbank for crushed rock aggregate (Lincolnshire limestone) should be based on the average of the last three-years (2022-2024) sales** (see table 13).

8. Future provision

Sand and gravel

8.1 At the end of 2024, Lincolnshire had sufficient permitted reserves of sand and gravel to meet the 7-year minimum landbank, based on average sales over the period 2015-2024.

8.2 The existing Sites Locations Development Plan Document (SLD) allocates eight sites for the winning and working of sand and gravel during the current plan period up to 2031. Tables 21a to 21c demonstrate how the requirement for a steady and adequate supply of sand and gravel would be met from the allocated sites within each of the production areas.

8.3 For each production area, provision has been made to release additional sand and gravel resources that are over and above the estimated shortfall for the plan period. This is because some of these sites would only be partially worked as they would not be required until well into the plan period.

8.4 The level of provision made in this document was based on the average 10-years of sales over the period 2004-2013 (in accordance with policy M2 of the Core Strategy and Development Management Policies). Moving forward, the current 10-year average sales figure (2015-2024) for the whole county remains closely aligned with the annual provision rate set out in the adopted plan. Unfortunately, data for the three production areas has not been available since 2021.

8.5 In addition to the existing mineral provision, policy M4 of the Core Strategy and Development Management Policies allows planning permission to be granted on sites not allocated in the Site Locations document (where required) to either meet a proven need that cannot be met from existing sites, or to meet a specific shortfall in the landbank, subject to specified criteria being met.

8.6 Over and above the provision made in the current plan, applications may also come forward to reactivate dormant sites under the Planning and Compensation Act 1991 or the Environment Act 1995.

Table 21a: Sites within the Lincoln Trent Valley Production Area allocated in the SLD to contribute to the estimated shortfall in sand and gravel during the plan period: 2014-2031

Reference	Site name	Total reserves	Estimated contribution to the shortfall of 4.56mt
MS04-LT	Swinderby Airfield	7.0mt	2.25mt
MS05-LT	Norton Bottoms Quarry, Stapleford	6.8mt	2.31mt

Table 21b: Sites within the Central Lincolnshire Production Area allocated in the SLD to contribute to the estimated shortfall in sand and gravel during the plan period: 2014-2031

Reference	Site name	Total reserves	Estimated contribution to the shortfall of 1.21mt
MS07/08-CL	Kettleby Quarry, Bigby	3.25mt	0.86mt

Reference	Site name	Total reserves	Estimated contribution to the shortfall of 1.21mt
MS09-CL	North Kelsey Road Quarry, Caistor	0.15mt	0.13mt
MS15-CL	Kirkby on Bain (Phase 2)	3.1mt	0.22mt

Table 21c: Sites within the South Lincolnshire Production Area allocated in the SLD to contribute to the estimated shortfall in sand and gravel during the plan period 2014-2031

Reference	Site name	Total reserves	Estimated contribution to the shortfall of 5.35mt
MS25-SL	Manor Farm, Greatford	3.0mt	2.79mt
MS27-SL	Baston No 2 Quarry, Langtoft	2.5mt	1.40mt
MS29-SL	West Deeping	2.2mt	1.16mt

Crushed rock

8.7 When the existing Minerals and Waste Local Plan was adopted, Lincolnshire had sufficient permitted reserves of crushed rock to last beyond the plan period to 2031. Consequently, further sites were not allocated in the Site Locations Development Plan Document. However, notwithstanding the potential reactivation of dormant minerals permissions, policies M5 and M6 of the Core Strategy Development Management Policies do allow further reserves to be released provided they meet a proven need that cannot be met from existing sites or sources and accord with all development management policies and restoration policies set out in that document.

8.8 At the end of 2024, Lincolnshire's landbank of limestone aggregate, based on average sales over the three-year period 2022-2024, was 9.06 years. This is slightly below the 10-year minimum requirement.

Updating the Lincolnshire Minerals and Waste Local Plan

8.9 Work has begun on updating the plan as set out in section 1. The new plan period will extend until the end of 2042 and, where appropriate, additional sites will be allocated to meet any shortfall in aggregate provision over the new plan period.

8.10 Our preferred approach to updating the plan was published for public consultation between July and September 2024. The preferred approach document identifies a shortfall in provision for both sand and gravel and crushed rock (limestone) over the new plan period, and a number of 'preferred' sites to meet identified requirements.

8.11 Similar to the adopted Minerals and Waste Local Plan, the preferred approach document proposes a criteria-based policy that permits development on non-allocated sites, where exceptional circumstances may arise, such as a proven need that cannot be met from existing reserves, or to meet a specific shortfall in the landbank.

8.12 The outcome of the Preferred Approach consultation, alongside up to date information and evidence, will be used inform the next stage of the plan-making process, which will be a further 6-week consultation on a final 'proposed submission' draft of the new plan, in advance of the formal public examination process.

Sand and gravel production areas

8.13 As set out in section 3, owing to a reduction in the number of operators in the county since 2021, and the need to protect commercially sensitive data, we have been unable to publish sand and gravel sales and landbank data for individual production areas. Data is only able to be reported for the county as a whole.

8.14 As a result, the preferred approach consultation document acknowledges that it is therefore no longer possible to plan for sand and gravel on the basis of three production areas within Lincolnshire and so the proposed spatial strategy for sand and gravel set out in that document adopts a county-wide approach. In addition, there are other reasons why the retention of production areas may no longer be appropriate, including the following.

1. It is becoming increasingly apparent that the original basis for dividing the county into production areas (as set out in section 1) is breaking down. More recent mineral surveys indicate that sand and gravel extracted in Lincolnshire is being transported much further than in previous times, with substantial amounts being exported to counties with their own indigenous resources.
2. During the past thirty years there has been a major consolidation in the minerals industry, and there are currently no local companies operating in the county. Instead, all active sites are being operated by a small number of multinational companies. This means it is becoming increasingly difficult to meet the confidentiality undertaking with respect to the publication of data for individual production areas. Even if the current situation in the Central Lincolnshire Production Area could be resolved, there is no guarantee that further problems will not emerge in the future.
3. Lincolnshire is also inconsistent with the other counties in the East Midlands in that it is the only one to be subdivided into production areas. Moving to a county-wide approach to sand and gravel provision would, therefore, bring the county in line with the rest of the region.

Conclusion

8.15 After considering local factors, national growth projections and recent production levels, the latest evidence suggests that the local aggregate assessment provision rate for calculation of landbanks should continue to be based on:

- the average of the last ten years (2015-2024) of sales for sand and gravel; and
- the average of the last three-years (2022-2024) sales for crushed rock (limestone) aggregate.

This equates to a provision rate of 2.377Mt per annum for sand and gravel, and 1.487Mt per annum for crushed rock (limestone) aggregate.

8.16 Based on these provision rates, at the end of 2024, there were sufficient permitted reserves of sand and gravel to exceed the minimum seven-year landbank required by the National Planning Policy Framework. Permitted reserves of crushed rock (limestone) aggregate provided a landbank of 9.06 years, slightly below the respective 10-year minimum. Several planning applications for both sand and gravel and crushed rock (limestone) aggregate were also pending determination at the end of 2024, which would provide additional reserves.

8.17 The Lincolnshire Minerals and Waste Local Plan is being updated and additional reserves will be required to cover the proposed new plan period up to 2042. Work on the plan is progressing, with consultation carried out in Summer 2024 on the preferred approach to updating the plan. The preferred approach consultation document identified several 'preferred' sites to meet identified requirements.

8.18 The outcome of the preferred approach consultation will inform the next stage of the plan-making process which will be a further 6-week consultation on a final 'proposed submission' draft of the new plan, in advance of the formal public examination process.