OXFORDSHIRE LOCAL AGGREGATE ASSESSMENT

(Calendar year 2023)

October 2024

Prepared by Oxfordshire County Council
August (including information provided in 2014 by LUC and Cuesta Consulting Limited)

Contents

1.Oxfordshire Summary of Key Data 2023

Summary – Oxfordshire County Council 2023 (million tonnes)									
Quarry Sales	**2023 Sales (Mt) & Trend**	**Average (8-yr) Sales & Trend**	**Average (3-yr) Sales & Trend**	**Annual Provision Rate (APR) (Mt[2])**	**Reserve (Mt)**	**Landbank (years)**	**Allocations (years)**	**Production Capacity (Mtpa)**	**Comments**
Soft Sand	⇩ 0.203	⇧ 0.235	⇩ 0.232	0.235	⇩ 3.288mt	14.0	N/A	0.309	LAA rate changed to 10 year average of 0.235mtpa Landbank above 7-year requirement
Sharp Sand & Gravel	⇩ 0.877	⇧ 0.839	⇧ 1.002	0.986	⇩ 7.693	7.8	N/A	1.409	LAA rate remains at 0.986 Landbank above 7-year requirement
Crushed Rock	⇩ 1.002	⇧ 0.964	⇩⇩ 1.134	0.964	4.744	4.9	N/A	1.689	LAA rate changed to 10 year average of 0.964 Landbank remains below 10-year requirement
Recycled / Secondary Aggregates	0.443	0.422	0.469	0.926	N/A	N/A	N/A	1.523	These are for 2022. 14% of operators surveyed responded to the 2023 RSA survey. Average sales is 8 years not 10

Rail Depot Sales (Sand & Gravel	c	c	c	c	c	c	c	c	Due to commercial confidentiality we are unable to share these figures
Rail Depot Sales (Crushed Rock)	c	c	c	c	c	c	c	c	Due to confidentiality, we are unable to share these figures

General Comments

The reduction in sales Oxfordshire saw in 2022 continued in 2023, across all three primary aggregate types.

The LAA Aggregate Provision Rate for Sharp Sand and Gravel remains at 0.986mtpa following a review of demand, consumption, imports and exports and other local factors such as economic growth, population and housing.

The 2023 LAA Aggregate Provision Rate for Soft Sand has been changed to the 10 year average, following a review of demand, consumption, imports and exports and other local factors such as economic growth, population and housing.

The 2023 LAA Aggregate Provision Rate for Crushed Rock has been changed to the 10 year average of 0.964mtpa following a review of demand, consumption, imports and exports and other local factors such as economic growth, population and housing.

Using the Crushed Rock LAA Rate, we are still below the required 10-year landbank for the sixth consecutive year. This issue will be considered within the preparation of the Minerals and Waste Local Plan

The Recycled and Secondary Aggregate figures are for 2022, and have been calculated using the Waste Data Interrogator and estimates from previous returns as 14% of operators responded to 2023 survey.

2.Executive Summary

2.1 The National Planning Policy Framework, December 2023 (NPPF) states that mineral planning authorities should prepare an annual Local Aggregate Assessment (LAA).

2.2 The LAA is required to:

- Forecast the demand for aggregates based on average 10 years' sales data and other relevant local information;
- analyse all aggregate supply options and;
- assess the balance between demand and supply.

2.3 This is the twelth LAA for Oxfordshire and includes the 2023 aggregate sales and reserves data for the County. The 10-year period covered by this LAA is 2014 up to 2023 and the three-year period is 2021 – 2023.

2.4 The primary aggregate figures within this LAA are taken from the 2023 Aggregates Minerals (AM2023) undertaken primarily by the British Geological Survey under a contract with the Ministry of Housing, Communities and Local Government (MHCLG) and supported by Oxfordshire Council Council, on behalf of South East England Aggregate Working Party.

Demand

Sharp Sand and Gravel

2.5 Sales of Sharp Sand and Gravel decreased in 2023 to 0.877mt. This is a 9.8% decrease on 2022 sales, and 11% below the Aggregate Provision Rate for 2022 of 0.986mt.

2.6 There was an 6% increase in the 10-year sales average (0.839mt from 0.791mt), which is 14.9% below the current Aggregate Provision Rate. The 3-year sales average of Sharp Sand and Gravel increased by 1.5% to 1.002mt, which remains higher than the 10-year average and 1.6% higher than the Aggregate Provision Rate for 2022.

2.7 Having considered the sales trends and other relevant information contained within this report, it is considered not necessary to change the Aggregate Provision Rate for Sharp Sand and Gravel and it will remain at 0.986mt per annum.

Soft Sand

2.8 Sales of Soft Sand in 2023 decreased to 0.203mt, a decrease of 11% on 2022 sales and 16% below the Aggregate Provision Rate for 2022 of 0.243mt.

2.9 The 10-year sales average increased 1.6% to 0.235mt from 2022, which is 3.2% below the Aggregate Provision Rate for 2022 of 0.243mtpa. The 3-year sales average decreased 1% on the previous year to 0.232mt which is 4.5% lower than the current 0.243mpta.

2.10 Having considered the sales trends and other relevant information contained within this report, it is considered necessary to change soft sand Aggrergate Provision Rate to the 10 year sales average of0.235mtpa.

Crushed Rock

2.11 Sales of Crushed Rock in 2023 decreased to 1.002mt, a decrease of 12.6% on 2022, though 9.6 % above the Aggregate Provision Rate of 2022 of 0.914mt.

2.12 The 10-year sales average increased 5.4% to 0.964mtpa compared with 2022, which is 5.5% above the Aggregate Provision Rate for 2022. The 3-year sales average decreased 2.4% to 1.134mt on the previous 3-year period, this is 24% higher than the Aggregate Provision Rate for 2022.

2.13 Having considered the sales trends and other relevant information contained within this report, it is therefore considered necessary to change the Aggretate Provision Rate for Crushed Rock to the 10 year average of 0.964mtpa.

Rail Depots

2.14 In 2023, there were no returns from operators on sales from Rail Depots. However, due to a number of planning decisions in 2021, Oxfordshire has increased its rail depot capacity to over 3.5million. It is known that the increased capacity at Hennef Way Banbury is temporary to provide material for HS2, and Appleford Sidings has added two more rail sidings. This site now has a planning condition limiting it to 1.5million tonnes per annum.

Recycled and Secondary Aggregates

2.15 To ensure a consistent picture of the avaliablity of secondary and recycled aggregates over time which could result in sales, this LAA uses an approach from the published Guidance on Assessing Levels of Recycled Aggregates[1].

2.16 Due to the Environment Agency's data on CDE in the Waste Data Interrogator for 2023 not being released at the time of report writing, we are unable to estimate the Recycled Waste findings for 2023. This will be published in future LAA's. Using 2022 data, estimated Recycled and Secondary aggregates was estimated to be 0.443 millon tonnes.

2.17 The LAA APR figure for recycled and secondary aggregate should be maintained as the provision figure set in the Oxfordshire Minerals and Waste Local Plan: Part 1 – Core Strategy 2017, Policy M3 which is 0.926mtpa.

Supply

Sand and gravel

2.18 In Oxfordshire at the end of 2023, there were 11 sharp sand and gravel quarries within Oxfordshire, two currently inactive. The permission at Stonehenge Farm quarry expired at the end of 2023 and therefore the permitted 1.5 million tonnes (mt) has now been removed from the landbank. One permission was granted in 2023 for Sand and Gravel, for an extension at Sutton Wick for 128,000 tonnes. There were four Sharp Sand and Gravel planning applications outstanding at the end of 2023.

2.19 Total permitted reserves of Sharp Sand and Gravel in Oxfordshire at the end of 2023 were 7.693mt. Using the latest Aggregates Provision Rate figures of 0.986 mpta, this gives a landbank of 7.8years. This is in accordance with the

[1] Recycled Aggregates Data: Guidance on Assessing Levels of Recycled Aggregates April 2022

National Planning Policy Framework (NPPF) requirements of a landbank of at least 7 years.

Soft Sand

2.20 In Oxfordshire, at the end of 2023, there were 8 sites with planning permission for Soft Sand extraction, with 2 currently inactive. No planning applications for Soft Sand were granted in 2023.

2.21 Total permitted reserves for Soft Sand in Oxfordshire at the end of 2023 were 3.288mt. Using the proposed Aggregates Provision Rate figure of 0.235 mpta, this gives a landbank of 14.0 years. This is in accordance with the NPPF requirements of a landbank of at least 7 years.

Crushed Rock

2.22 At the end of 2023, there were 12 active sites with planning permission for Crushed Rock extraction. No permissions for Crushed Rock were granted in 2023. There were four planning applications for Crushed Rock outstanding at the end of 2023.

2.23 Total permitted reserves for Crushed Rock in Oxfordshire at the end of 2023 were 4.744mt. Using the proposed LAA Aggregates Provision Rate of 0.964. mtpa this gives a landbank of years 4.9 years which is below the requirements of the NPPF of at least a 10 year landbank.

Recycled and secondary material sites

2.24 Due to the Environment Agency's data on CDE in the Waste Data Interrogator for 2023 not being released at the time of report writing, we are unable to estimate the Recycled and Secondary aggregate figures for sales in Oxfordshire for 2023. This will be published in future Local Aggregate Assessments.

2.25 At the end of 2022, Oxfordshire's estimated recycled and secondary aggregate available to be sold was recorded as approximately 0.443mt. However, permitted capacity taken from planning decisions, application statements and previous survey findings at the end of 2023 was 1.523mt .

Rail Depots

2.26 Oxfordshire has four permitted rail depots, three of which are operational. No returns for the sales from the Depots were returned in 2023.

Relationships with other MPA's

2.27 Every county in the UK has to import aggregates because none possess the geology necessary to produce all the types of aggregate required. All sales between Authority areas which reflect supply and demand are tracked in the approximately four year national aggregate surveys.

2.28 The most recent is the 2023 Aggregates Minerals Survey for England and Wales (AM2023),undertaken by British Geological Survey (BGS) under a contract with the Ministry of Housing, Communities and Local Government (MHCLG). The AM2023 will set out aggregate movements at a sub-regional level. The BGS have not released the Report and complete data on imports and exports is not yet available for the 2023 survey, therefore this will be reported in the LAA for 2024 data. The most recent data available, was from

the AM2019 survey which was discussed within the LAA2020. This survey highlighted that Oxfordshire is a net exporter of all Land Won Sand and Gravel and Crushed Rock.

Factors affecting supply and demand

2.29 2023 has seen a continued decrease in sales of all primary aggregates compared to 2022.

2.30 2020 saw a global pandemic (Covid). The very high sales in 2021, could have been a result of businesses and development commencing again after lockdowns, and a surge in building and construction to move planned projects forward as quickly as possible after Covid.

2.31 There are major infrastructure projects as well as local housing and transport projects continuing to take place during the Plan period.

Executive Summary Conclusion

2.32 The purpose of an annual Local Aggregates Assessment is to review the latest information available, in order to forecast future demand as well as analysing all aggregate supply options and assessing the balance between supply and demand.

2.33 To ensure that supply continues to meet demand, the **Aggregates Provision Rate (APR)** will be as follows for 2023 onwards:

- **Sand and Gravel – 0.986mtpa – No change from 2022**
- **Soft Sand – 0.235mtpa – Decrease from 2022**
- **Crushed Rock – 0.964 mtpa – Increase from 2022**
- **Recycled and Secondary Aggregates- 0.926mtpa – No change from 2022**

2.34 Using these APRs and the Oxfordshire reserves at the end of 2023, the Landbank can be calculated as:

- **Sand and Gravel – 7.8 years**
- **Soft Sand – 14 years**
- **Crushed Rock – 4.9 years**

2.35 To meet the current Minerals and Waste Local Plan Part 1: Core Strategy (2017) requirements, we will need to identify Sharp Sand and Gravel sites to meet the following mineral requirements over the Plan Period. There would be no further need to identify any further Soft Sand and Crushed Rock.

- **Sand and Gravel – 2.649million tonnes**.
- **Soft Sand – 0 million tonnes**
- **Crushed Rock – 0 million tonnes**

2.36 However this will not address the issue of the Crushed Rock landbank being below the at least 10 years required by the NPPF. Therefore in December

2022, it was agreed to commence with a new Minerals and Waste Plan for Oxfordshire. This new Plan will consider mineral requirements for all aggregates over the new Plan period during its preparation. There has been a delay in the production of the new Minerals and Waste Local Plan, due to Central Governments proposed significant changes to the plan making process.

2.37 Mineral requirements within the Core Strategy will be replaced with the mineral requirements as set out in the new Minerals and Waste Plan upon adoption.

3. Demand

Land Won Aggregate

Sharp Sand and Gravel Past Sales

3.1 Sales of Sharp Sand and Gravel from quarries in Oxfordshire for the period 2014 – 2023 are shown in Table 3.1. These figures are taken from two sources: The annual Aggregates Minerals Survey for England and Wales undertaken by Oxfordshire County Council on behalf of SEEAWP (South East Aggregates Working Party) and the historic four/five yearly British Geological Survey (BGS) under a contract with the Ministry of Housing, Communities and Local Government (MHCLG).

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-year average	Last 3-year average
0.639	0.768	0.651	0.703	0.796	0.994	0.830	1.157	0.972	**0.877**	**0.839**	**1.002**

Table 3.1: Sales of Sharp Sand and Gravel 2014 – 2023 (million tonnes) (Sources: SEEAWP Aggregates Monitoring Surveys)

3.2 Sales of Sharp Sand and Gravel decreased 9.8% in 2023 compared with 2022.

3.3 Sales in 2014 were just still showing the effects of the economic recession and the weaker economic period of 2012. The closure of Caversham Quarry during 2013 also accounted for a reduced working of sand and gravel during this period. This closure was due to exhaustion of reserves in 2012, pending grant of permission for an extension which was approved in August 2014 but not commenced until 2017. The recession and the quarry closure are likely to have affected the total sales around 2014.

3.4 There was also a 15% fall in sales of Sharp Sand and Gravel from quarries in Oxfordshire from 2015 to 2016. Most of this decrease was accounted for by sales at one quarry - Bridge Farm, Sutton Courtenay. The fall in sales at this quarry in 2016 was caused primarily by a break in production whilst the determination and issue of the planning permission to work the full depth of gravel in Phase 4b at Bridge Farm was awaited; the permission was issued on 17 May 2016.

3.5 The shortfall in supply from Bridge Farm during this time was made up by imports of marine dredged material, delivered by rail from East London into Appleford Sidings, Sutton Courtenay Depot. Crushed Rock (limestone) was

also imported by rail into this depot, from Somerset, and used to substitute sand and gravel.

3.6 In 2017 sales of sand and gravel extracted from Bridge Farm, Sutton Courtenay Quarry returned to the 2015 level; and overall sales of Sharp Sand and Gravel in Oxfordshire increased again.

3.7 In 2020, the Global pandemic Covid resulted in multiple lockdowns and industry closed or slowed down for periods, which caused a fall in sales. In addition Hatford was awaiting a determination for their western extension, which was submitted in 2019.

3.8 In 2021, developments and strategic projects both in Oxfordshire and neighbouring Authorities commenced again following the lockdowns of 2020. Also, production at New Barn Farm, following the 2018 permission became established and there was permission for an extension at Hatford that enabled production on the site to continue in 2021.

3.9 In 2022, there was a slight decrease in sales compared with 2021, but this was considered to be settling after the unusual years in 2020 and 2021. 2022 also saw rises in inflation and the energy crisis, along with an increase in the cost of materials. This could have potentially impacted on sales.

3.10 Sales in 2023, have once again dropped, by 9.8%.

3.11 All these factors have had implications for the 10-year average and 3 year average.

3.12 The 10 year average is currently 0.839tpa, which includes the time period following the recession (2014-2017) and the other associated factors for the reduced sand and gravel sales over this time.

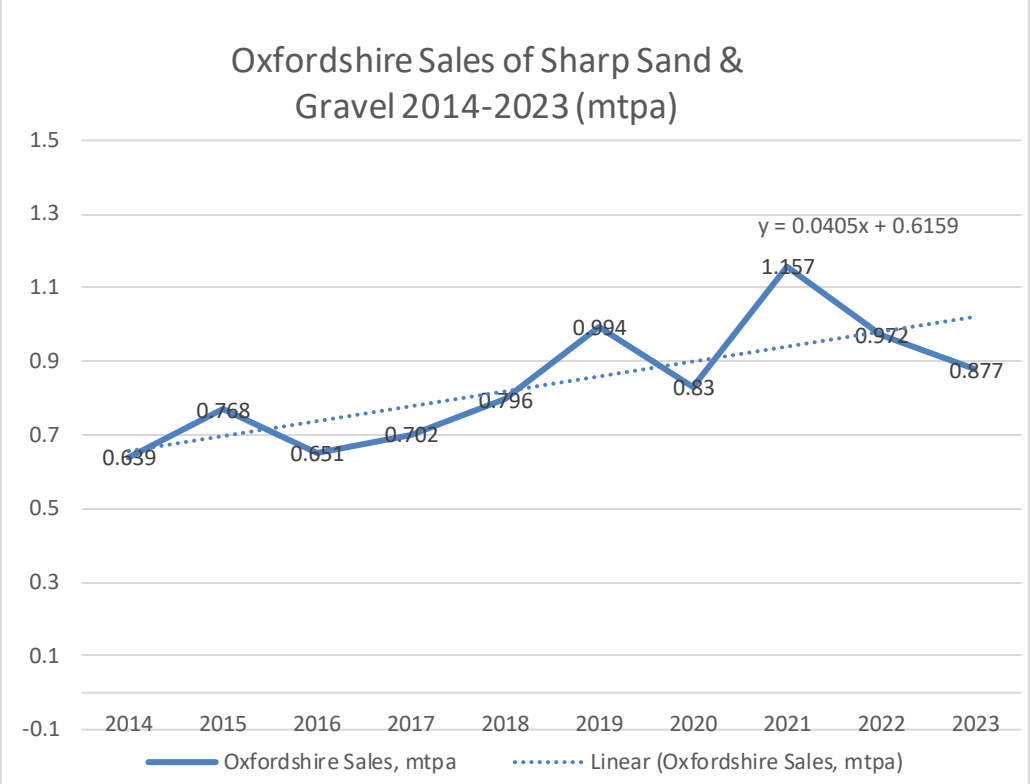
3.13 The 3 year average is 0.986tpa, but it should be noted that the 3 years contain the highly unusual years of 2020 and 2021.

3.14 Based on linear trend analysis shown in Figure 3.1, the average rate of increase over the period 2014 to 2023 in Oxfordshire was 0.0405mtpa, giving a total increase of 0.405mtpa over the 10-year period with four intervals of decline.

3.15 There has been a 6% increase in the 10-year period and a 1.6% increase in the 3-year period[2]. The 3-year sales average of Sharp Sand and Gravel is 19.4% higher than the 10-year average.

Figure 3.1 Linear trend analysis - Sharp Sand and Gravel sales (mtpa) 2014-2023

[2] Oxfordshire County Council LAA2023



Soft Sand Past Sales

3.16 Sales of Soft Sand from quarries in Oxfordshire 2014–2023 are shown in Table 3.2. These figures are taken from two sources: The annual Aggregates Minerals Survey for England and Wales undertaken by Oxfordshire County Council on behalf of SEEAWP and the historic four/five yearly British Geological Survey (BGS) under a contract with the Ministry of Housing, Communities and Local Government (MHCLG).

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10 year average	3 year average
0.230	0.233	0.227	0.251	0.252	0.254	0.210	0.264	**0.229**	**0.203**	**0.235**	**0.232**

Table 3.2: Sales of Soft Sand 2014 – 2023 (million tonnes) (Sources: SEEAWP Aggregates Monitoring Surveys)

3.17 Unlike Sharp Sand and Gravel, sales in 2014 no longer showed signs of the effects of the economic recession and the weaker economic period of pre 2012. Sales had picked up and were steadily increasing up until Covid in 2020.

3.18 Hatford quarry gained permission in early 2021 which enabled production to continue on site. Planning permission for Shellingford was issued at the end of 2020 and production resumed on site in 2021. Along with the post COVID surge in developments, this caused a sharp increase in the sales in 2021.

3.19 Sales decreased in 2022 and decreased again, by 11.4%, in 2023. 2023 sales are the lowest sales since 2013. This could be due to less demand, or it could be due to the geology of the sites. Soft Sand is often located with Crushed rock reserves, and if more Crushed Rock has been extracted from this site over 2022 and 2023 due to geology, this may have an impact on our Soft Sand sales for that year.

3.20 Sales saw a 3.35% increase in the 10-year period, but a 3.6% decrease over the 3-year period. However, the 3-year average is 1.2% higher than the 10-year baseline period[3].

3.21 Linear trend analysis (Figure 3.2) over the period 2014 to 2023 now reveals an average rate of decrease of 0.0012mtpa for Oxfordshire (with four periods of decline) over the baseline period.

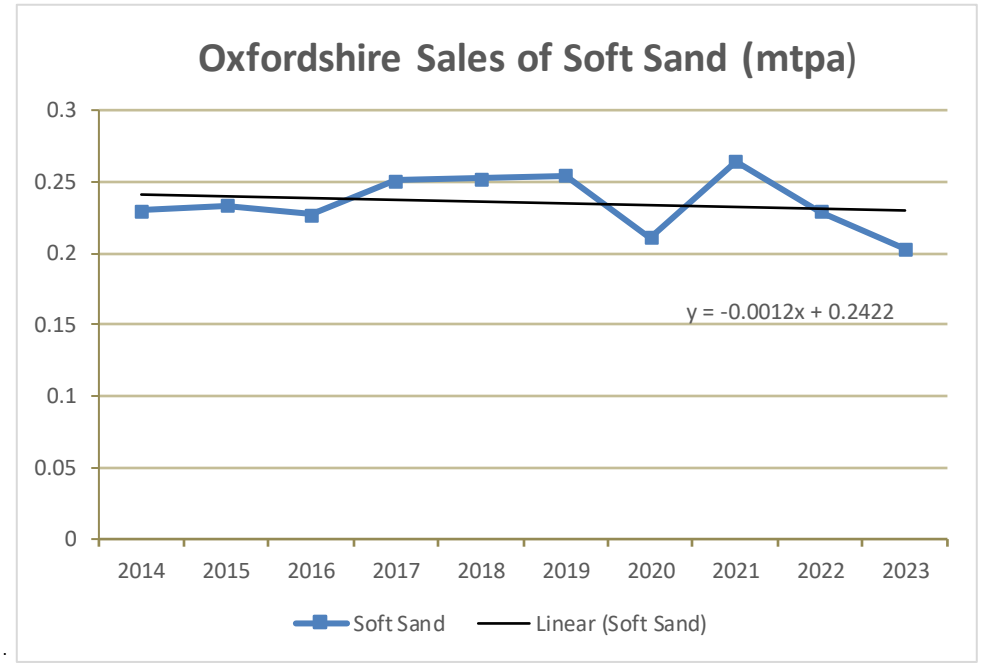


Figure 3.2 Linear trend analysis – Soft Sand sales 2014-2023

Overall sand and gravel sales

3.22 Oxfordshire saw a 9.8% decrease in Sharp Sand and Gravel and a 11.4% decrease in Soft Sand giving an overall decrease of 10.6% in all Sand and Gravel, which is higher than the Mineral Products Associations (MPA[4]) report which anticipated a 4.7% decline in construction in 2023.

[3] Appendix 1
[4] Regional_overview_of_construction_and_mineral_products_markets_in_GB_Spring_2023.pdf (mineralproducts.org)

Crushed Rock Past Sales

3.23 Sales of Crushed Rock from quarries in Oxfordshire for the period 2014– 2023 are shown in Table 3.3. These figures are taken from the Aggregates Monitoring Survey by SEEAWP and the BGS Survey.

2014	2015	2016	2017	2018	2019	2020	2021	2022	**2023**	**10 year average**	**3 year average**
1.061	0.914	0.715	0.867	0.751	0.843	1.087	1.254	1.146	**1.002**	**0.964**	**1.134**

Table 3.3: Sales of Sharp Crushed Rock 2014- 2023 (million tonnes) (Sources: SEEAWP Aggregates Monitoring Surveys)

3.24 The sales for 2023 decreased 12.6% compared with 2022.

3.25 The Minerals Products Association[5] records that across the UK crushed rock sales fell by between 5.8% in the UK over the first 3 Quarters of 2023.

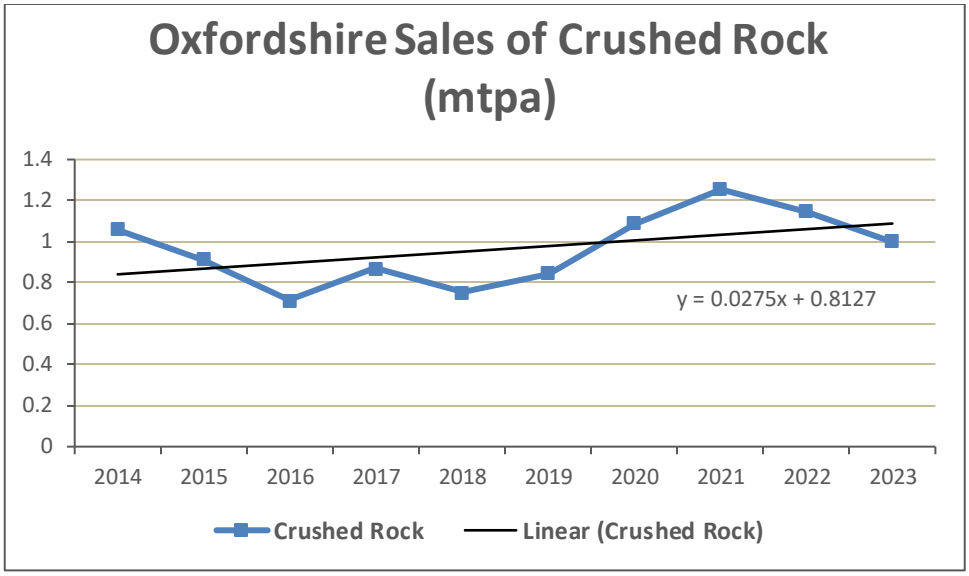
3.26 It is believed HS2 is still demanding significant mineral, as shown by the demand for increased capacity at Banbury Rail depot to bring in more material to meet this projects requirement in 2021 for five years. There was an application for 2.7 million tonnes of material at Finmere which is specifically for HS2 however, this has now been withdrawn and construction of HS2 continues, the materials for which could be being met from our Crushed Rock quarries, impacting significantly on our sales.

3.27 In 2023 there was a 5.5% increase on the previous 10-year average period. However the three-year average decreased by 2.4% on the previous 3-year period.

3.28 Linear trend analysis of Crushed Rock sales (Figure 3.3) over the period 2014 to 2023 reveals an average rate of increase of 0.0502mtpa for Oxfordshire. The resulting overall increase over that period is 0.028mt (5 periods of decline).

Figure 3.3 Linear trend analysis – Crushed Rock sales

[5] Deepening challenges for construction revealed by latest MPA survey (mineralproducts.org)



Secondary and Recycled Aggregate

3.29 Whilst reasonable data on recycling capacity is available for Oxfordshire through Decision Notices and Planning Statements, robust data on arisings and sales of construction, demolition and excavation waste (CD&E) is difficult to obtain and a standard methodology has not been adopted nationally.

3.30 Past aggregates monitoring surveys, for example, have not produced a full response from secondary and recycled aggregates site operators and returns are getting less each year as Operators also have to supply the information to the Environment Agency. 2023 saw a 14% response rate. This is a recognised issue across Minerals and Waste Planning Authorities

3.31 In 2021, due to poor returns the approach was taken to use survey returns where these were received, and where not, then a 50% average of material received into a CDE recycling site was taken from the WDI received figures for that site, as this was the recommended approach by our regional group SEWPAG at this time.

3.32 In 2022, the National Waste Technical Advisory Board and Aggregate Working Party Chairs produced a Guidance note [6]. This details the various options available for the collation of data to estimate arisings and sales of Recycled Aggregate.

3.33 Therefore in light of the publication of this guidance and the continued reduction in operator responses, a methodology has been applied. This methodololy uses the WDI for "Waste received" data into CDE sites (using CDE waste codes as set in the guidance) for recycling, recovery and transfer. Material used in landfill and on/in land is not considered.

[6] Recycled Aggregates Data: Guidance on Assessing Levels of Recycled Aggregates April 2022

3.34 Then using the WDI for “Waste removed”, (with the same CDE codes) any waste removed from the sites that received waste is identified and removed from the “waste received” data for each site.

3.35 This provides an estimate of material that was received into Oxfordshire sites, which was not removed as waste. Therefore, considered material that potentially could be sold.

3.36 It is recognised that there may be a number of limitations with this methodology such as an element of overestimating/double counting associated with the use of data from the WDI, where waste is handled at more than one facility. In addition, waste recorded as being received by mobile plant in the WDI has been excluded because this data is not available for most years and also as mobile plant are only listed in the WDI based on the registered address of the company, which is not necessarily where the mobile plant is actually used. Lastly, it is also recognised that there may be an element of overestimating/double counting associated with the use of data from the WDI, where waste is handled at more than one facility.

3.37 However due to the consistent poor Recycled and Secondary Aggregate Returns, a lack of national methodology and any further detailed evidence, this approach will provide a consistent approach to be able to collate, review and monitor estimated potential recycled aggregate for sale from sites within Oxfordshire over a period. Within this LAA this methodology has also been applied retrospectively to previous years (Table 3.4 below) to be able to view these estimates over time. This will be explored in further detail as we prepare our New Minerals and Waste Local Plan.

3.38 As the WDI for 2023 had not been released at the time this report was written, this LAA is unable to calculate the Recycled Aggregate for 2023.

3.39 For Secondary Aggregate sites, an estimate is made using averages from previous returns.

3.40 Using the Recycled Aggregate methodology with the secondary estimate for 2022 the Recycled and Secondary Aggregate figure for sales is estimated to be 0.443mt.

3.41 It is likely that these estimated 2022 figures are significantly less than the total actual production.

2015	2016	2017	2018	2019	2020	2021	2022	8 year average	3 year average
0.389	0.439	0.395	0.316	0.435	0.444	0.516	0.443	**0.423**	**0.469**

Table 3.4: Sales of Secondary and Recycled Aggregate 2015-2022 (Sources: SEEAWP Aggregates Monitoring Surveys)

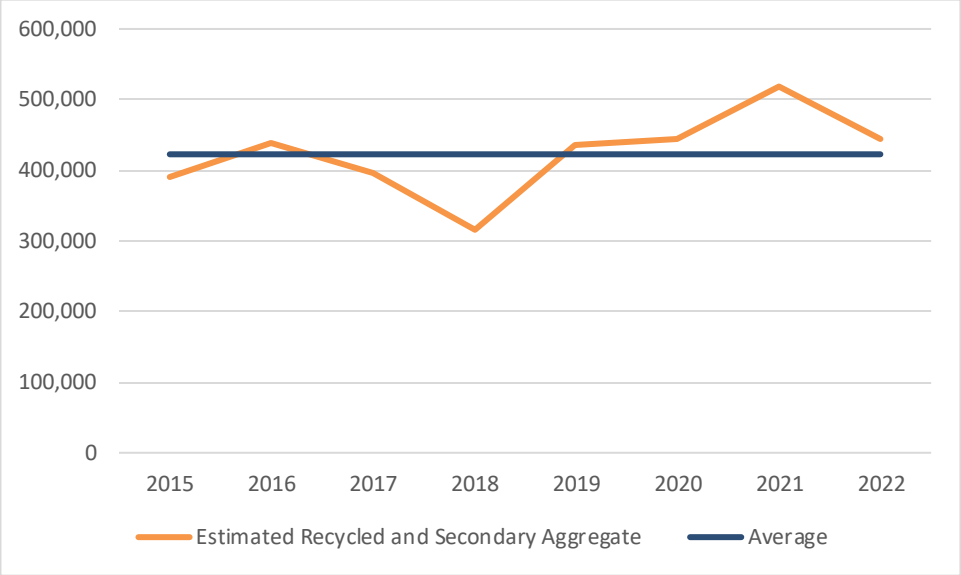


Figure 3.4 Recycled and Secondary Aggregate Sales against 8 year average of 0.423

3.42 Within the Mineral Products Association report "The Contribution of Recycled and Secondary Materials to Total Aggregates Supply in Great Britain - Estimates for 2021" it is reported in 2021, total recycled and secondary aggregates are estimated to have accounted for 28% of total aggregates supply in Great Britain.

3.43 If this percentage was rolled over to Oxfordshire's total Aggregate sales for 2023, it could be estimated that 0.583million tonnes of recycled and secondary aggregate were sold in 2023.

Imports of Secondary Aggregates

3.44 No known secondary aggregates are currently transported into Oxfordshire. This is largely due to the costs of transporting the material, and because the exemptions from the aggregates levy, that gave secondary aggregates a cost advantage over primary aggregates were withdrawn in April 2014.

Rail Depots

3.45 There are three railhead depots in Oxfordshire used for importing aggregates, namely at Banbury, Kidlington and Sutton Courtenay, and these are safeguarded in the Oxfordshire Minerals and Waste Local Plan: Part 1 Core Strategy. These depots import Crushed Rock aggregates from the South West (Somerset) and the East Midlands (Leicestershire). There is planning permission for a further railhead aggregate depot at Shipton on Cherwell, but this has not yet been developed. There is also a depot at Hinksey Sidings, Oxford but this is used solely by the rail industry to bring in rail ballast for internal use on the rail network; it is currently operational but its use for the transhipment of rail ballast has been intermittent in the past.

3.46 Figures for imports of Crushed Rock by rail collected by Oxfordshire County Council are only available from 2007 onwards. Prior to that year, only the regional totals were available.

3.47 In 2023, there were no returns from operators on sales from Rail Depots. Therefore, we are unable to report on sales for 2023.

3.48 However, due to a number of planning decisions in 2021, Oxfordshire's rail depot capacity increased to over 3.5million tonnes.

3.49 It is known that the increased capacity at Hennef Way Banbury is temporary for 5 years to provide material for HS2, and Appleford Sidings has added two more rail sidings. This site now has a condition limiting it to 1.5million tonnes per annum.

3.50 Due to this demand for additional capacity, it can be considered that sales remain significant through Rail Depots in Oxfordshire.

Historic Rail Depot Sales

3.51 The rail depot figures are confidential because they were derived from returns for only two companies. The figures for 2020 incorporated imports by rail from Somerset, Leicestershire and elsewhere, but also included significant quantities (from South Wales, South Gloucestershire and Kent) that were delivered to the rail depots by road; this distorted the true picture for rail transportation. It at least provides quantification of those road imports. The figures do not include imports of Crushed Rock to Hinksey Sidings, Oxford, which were brought in by rail and despatched by rail for use as rail ballast on the rail network (over a wider area than just Oxfordshire).

3.52 Although the raw data is confidential, in 2020 it was possible to report the variations over time (from 2007 onwards) in overall sales from the rail depots from the two reporting companies. Table 3.5 below, expresses the annual sales from rail depots for 2007 to 2020 as proportions of the sales figure for 2007.

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1.0	1.1	0.7	0.9	1.2	1.0	1.0	2.4	2.2	2.4	2.5	2.5	No return	2

Table 3.5: Pattern of sales from Oxfordshire rail depots 2007-2020 (Source: Oxfordshire County Council Aggregates Monitoring Survey)

3.53 Table 3.5 shows that the figures vary from one year to another but that up to 2013 the fluctuation was less marked than those for sales of sand & gravel. Since 2013, the situation has changed, with annual rail imports for 2014 to 2018 being consistently around two and a half times that imported in 2007. However, this dropped to around 2 times in 2020. This could be due to Covid and lockdown

3.54 The combined sales from the three railhead depots that were operational in 2020 represented 74% of the total throughput permitted capacity of these three depots at this time, indicating that there was currently little headroom for further increase in imports of Crushed Rock by rail.

3.55 There is now significantly more capacity at two of the sites within Oxfordshire therefore it could be considered that sales will have also significantly increased.

Consumption

3.56 In 2023 the British Geological Survey (BGS) undertook the Aggregates Survey alongside Oxfordshire County Council, and this survey included asking operators for imports and exports of minerals between Mineral Planning Authorities, alongside asking for reserve and sales data. Unfortunately at the time of writing, the Import and Export data collation from BGS has not been released and so this LAA is unable to report on this.

3.57 Until it is published the most recent data on imports and exports is the 2019 BGS Aggregates Survey. This set out how much mineral Oxfordshire imports and how much is exported.[7]

3.58 The final report also sets out how much Oxfordshire Land Won Aggregate Oxfordshire consumed in 2019, which is an indicator of the quantity of each mineral type Oxfordshire requires. Sharp Sand and Gravel and Soft Sand are combined within the BGS Survey.

3.59 The full summary is shown in Appendix 2. The consumption figures have been summarised in Table 3.6. This also includes the information for the comparative years of 2009 and 2014.

[7] Aggregate Minerals Survey for England and Wales, 2019 (publishing.service.gov.uk)

	Sand and Gravel 2009	Crushed Rock 2009	All Oxfordshire Aggregate 2009	Sand and Gravel 2014	Crushed Rock 2009	All Oxfordshire Aggregate 2014	Sand and Gravel 2019	Crushed Rock 2019	All Oxfordshire Aggregate 2019
Total Consumed within Oxfordshire (Mt)	0.757	0.625	1.383	0.765	1.501	2.266	**0.900**	**0.617**	**1.517**

Table 3.6: Mineral consumed within Oxfordshire, 2009, 2014 and 2019 (BGS Surveys)

3.60 The table shows that in 2019, Oxfordshire consumed 0.900mt of sand and gravel, an increase of 17.5% from 2014, and an increase of 18.9% on 2009.

3.61 For crushed rock, Oxfordshire consumed 0.617mt in 2019. This is a decrease of 58.5% from 2014, and a decrease of 1.3% on 2009.

3.62 It should be noted that for some minerals within the survey it is not clear where they were consumed. These minerals are identified as sold within the South East or Unallocated. The consumption rates within Oxfordshire do not include any of the quantities from these two categories.

4.Factors affecting demand

4.1 Although the NPPF requires that the level of future provision within the LAA should be based, in part, on the rolling average of 10 years' sales figures. it also requires "other relevant local information" to be taken into account.

4.2 We need to consider whether or not the historical 10-year average for land-won primary aggregate production can be relied upon as a guide to future levels of provision, or whether this needs to be changed in order to reflect other factors which may influence either the supply (availability) and/or the demand for aggregates produced within Oxfordshire, in future years.

The Economy and Growth

4.3 In considering economic growth on the supply and demand of aggregates, several national forecasts have been considered. To consider economic forecasts this section considers Gross Domestic Product (GDP) along with construction rates.

4.4 The Gross Domestic Product (GDP) is only available at UK level, but it does provide a background indicator as to the relative changes in economic activity likely to be experienced in Oxfordshire over time. Table 4.1[8] below shows the annual GDP year on year growth for the UK as a whole for the 10-year baseline period. The average rate of growth in the UK over the period 2014 to 2023 remains at 1.6%. 2023 saw the lowest GDP since 2009 (excluding Covid year of 2020)

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
3.2%	2.2%	1.9%	2.7%	1.4%	1.6%	-10.4%	8.7%	4.3%	0.1%

Table 4.1: Changes in UK Real GDP over the baseline period (ONS)[9]

4.5 The growth forecasts are set out in Table 4.2 below from the Office for Budget Responsibility as of March 2024[9]. The 2024-2028 average has dropped to 1.8% compared with last years 2.8% average for 2021-2027.

[8] Gross Domestic Product: Year on Year growth: CVM SA % - Office for National Statistics (ons.gov.uk)
[9] Economic and fiscal outlook - March 2023 (obr.uk)

	2022	2023	2024	2025	2026	2027	2028	2029 – 2032	2022-2028 average
UK	4.3%	0.3%	0.8%	1.9%	2.0%	1.8%	1.7%	Not yet forecast	**1.8%**

Table 4.2: Growth Forecasts

4.6 There are also more recent assumptions for GDP Growth[10] which are taken from a range of independent predictions. 2024 as 1.1% and 2025 as 1.3% compared with the prediction of 0.8% for 2024 and 1.9% set out in the table above, so over 2024 and 2025 slightly less growth (0.3%) is anticipated.

4.7 In addition, inflation could be considered, as this impacts on costs for raw materials, energy and labour, including the minerals sector. The UK inflation rate, as measured by the Consumer Prices Index, rose almost continuously from under 1% in early 2021 to 9.2% in November 2022. The inflation rate has then declined, dropping to 4.2% in November 2023. The inflation rate at July 2024 was 3.1%[11] (the most recent figure available at the time of publication).

4.8 The Construction Products Association forecasts that construction output is due to fall by 2.9% decline in construction in 2024 with a 2% growth in 2025. Further growth of 3.6% is anticipated in 2026, but clearly, there is greater uncertainty around activity in 2026 given the impacts of a new government.

4.9 According to the Mineral Products Association Regional overview of construction and mineral products markets in Great Britain report, private housing, which is a key driver of mineral products demand, was expected to see back-to-back falls of 11% in 2023 and 1% in 2024.[12]

4.10 The Report also states that the construction outlook in the South East will rise around 3.6% per annum in 2023-2027, due to private housing growth, however this includes large developments in Sussex and work in Ebbsfleet Garden City. The report does not go down to Authority level.

4.11 It would be beneficial if consideration could be given to any indicators of more local economic growth. Unfortunately, no quantitative information is available on this, though Oxfordshire does have a growth agenda, as set out in the 2016 Oxfordshire Strategic Economic Plan and in the Oxfordshire Growth Board's Oxfordshire Infrastructure Strategy (OXIS)[13].

[10] Forecasts_for_the_UK_economy_August_2024.pdf (publishing.service.gov.uk)
[11] CPIH ANNUAL RATE 00: ALL ITEMS 2015=100 - Office for National Statistics (ons.gov.uk)
[12] Construction Industry Forecasts - Summer 2024 (constructionproducts.org.uk)
[12]Regional_overview_of_construction_and_mineral_products_markets_in_GB_Spring_2023.pdf (mineralproducts.org)
[13] Local Growth Fund Projects | OxLEP (oxfordshirelep.com)

Economic Forecast Conclusion

4.12 At this stage it could be considered that there is slight uncertainty in regards the economy, however it is anticipated there will be growth.

4.13 Future levels of economic growth could be less than anticipated and this could consequently result in reduced demand for construction aggregate in the future. This will be kept under close review in future LAA's.

Major Infrastructure Projects/Key Development

4.14 Major infrastructure projects, including those at the national scale, and key developments throughout Oxfordshire, should be considered alongside housing and associated infrastructure development in terms of their likely influence on the future demand for construction aggregates.

4.15 Oxfordshire's Local Industrial Strategy[14] 2020 highlights that the Infrastructure projects within Oxfordshire that are critical to the Investment Plan total £1,117.5million.

4.16 Across Oxfordshire developments, including infrastructure, includes:

- Allocated sites for development in the current District Local Plans.
- Housing Infrastructure Funded projects – HIF1 in Didcot and HIF2 on the A40.
- HS2
- Various highways improvements throughout Oxfordshire.
- The National Infrastructure Delivery Plan
- East West Rail
- Oxfordshire Housing and Growth Deal[1]: Provides £60m for affordable housing and £150m for infrastructure improvements, including road and rail. Supports the ambition of building 100,000 new homes across Oxfordshire between 2011 and 2031 to address the county's severe housing shortage and expected economic growth.
-).
- Oxfordshire Rail Corridor Study – including proposed new and improved railway stations and passenger services on the Cowley Branch Line.

[14] The Oxfordshire Investment Plan - August 2020.pdf (oxfordshirelep.com)
[1] https://www.gov.uk/government/publications/oxfordshire-housing-deal

- Oxfordshire Knowledge Spine, which includes Science Vale, Oxford and Bicester[3][15].
- Science Vale area: It is the largest concentration of research and development in Europe: 20,000 new jobs and around 20,000 new homes.

4.17 It is difficult to assess the overall impact of these infrastructure and major development proposals, in terms of their demand for construction aggregates. Some projects that were previously mentioned such as the Harwell Satellite Test Centre have now been built, whilst others such as HS2, East West Rail and growth within Bicester and the south of the county are currently underway, with a few yet to commence.

4.18 In 2024, the Labour Government were elected and have made a commitment to deliver 1.5 million homes over this parliament. If this is realised this could impact on demand for aggregate over the next few years.

Major Infrastructure Projects/Key Development Conclusion

4.19 Whilst it is difficult to quantify, evidence suggests that planned infrastructure and major development both within and outside the county will continue. Demand on minerals is therefore expected to be maintained whilst these continue.

Population and Housing Growth

4.20 In considering the future projections we also need to consider population growth and local authority housing forecasts.

4.21 OXIS[16] (2017) forecast that in the period 2016-2040, 123,500 additional homes will be built in Oxfordshire, the equivalent of 5,100 homes being built per year; and that population will increase by 39% from 688,000 to approximately 956,000.

4.22 Adopted District Local Plans in Oxfordshire indicate the major sites for new homes

- Cherwell – concentrated around Bicester, Banbury and the former RAF site at Upper Heyford, plus growth around Begbroke, Kidlington and Yarnton to meet Oxford's unmet need.
- Oxford City – concentrated at Barton Park, Northern Gateway and Oxpens.

[15] Our Strategic Economic Plan (SEP) | OxLEP (oxfordshirelep.com)

[16] Infrastructure Strategy (OxIS) | OxLEP (oxfordshirelep.com)

- South Oxfordshire – concentrated around Chalgrove Airfield and the Didcot Garden Town in conjunction with Vale of White Horse, with further strategic land at the edge of Oxford
- Vale of White Horse – concentrated around the Didcot Garden Town, Wantage and Abingdon (the Science Vale)[17]
- West Oxfordshire - concentrated at Cotswold Garden Village Eynsham, Witney and Chipping Norton.

4.23 Population figures are published by the Office of National Statistics[18](ONS). There has been a steady population increase between 2011 and 2023.

4.24 In the 2021 Census, the population of England and Wales grew by more than 3.5 million (6.3%) since 2011[19].

4.25 Unlike aggregate sales there was not a dip in population at the start of the baseline period, at least not at a county level, or on the scale associated with year-on-year variations. It is hard to draw a correlation between population figures and aggregate demand.

4.26 Over the 10-year period to 2023 there was an overall growth in the population of Oxfordshire of 73,609 people (an average of 1.15% per year).

4.27 Looking to the future, Oxfordshire County Council population forecasts (2023) predict a total population in Oxfordshire of 806,876 by 2031[20]. Whereas the ONS have population forecast of 727,396 by 2031. (Appendix 4).

4.28 Whilst there is no statistical justification for assuming that rates of population growth will correlate with changes in demand for aggregates, they do at least provide a mechanism for looking further ahead than the current economic forecasts. They suggest that there will be continued pressure for new housing and associated infrastructure development which is likely to be reflected in an increase in the demand for construction aggregates.

4.29 This is echoed in the Oxfordshire Strategic Economic Plan which states that "Our vision is Oxfordshire as a vibrant, sustainable, inclusive, world leading economy, driven by innovation, enterprise and research excellence"; and also, that "Both activity and employment rates are higher than the regional average – and substantially higher than the national average".

4.30 This can be examined further by considering data on rates of house completion (Appendix 4).

4.31 Using the District Authority Monitoring Reports for housing completions, for the 10-year baseline period (2013/14-2022/23) the average housing

[17] http://www.sciencevale.com/
[18] www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/
[19] Population and household estimates, England and Wales - Office for National Statistics (ons.gov.uk)
[20] insight.oxfordshire.gov.uk/cms/future-population

completion rate in Oxfordshire was 4,453 homes, which was up 9.6% from 40,62 homes per year (2012-2022)[21]

4.32 However, if we took the last 3 years average from the same data, as a baseline period (2022/23-2020/21), the average housing completion rate in Oxfordshire is 5,065,a 4% decrease on the previous 3-year baseline of 5,272 homes (2021/22-2019/20). With Covid in 2020 and the associated lockdowns this slight decrease could be expected as completions were held up in 2020.

4.33 Looking forward, the District Authority projections for housing growth for 2023 onwards can be seen in Appendix 4. Compared with previous years the projected housing growth to 2031 has decreased.

4.34 In 2022, it was projected that 51,461 homes would be built between 2023/24 and 2030/31, however in 2023, it was projected that 33,761 homes will now be built over the same period, a reduction of 34%. The Districts have provided reasons such as slow down in the housing market and infrastructure delays, and there was a national policy change through the December 2023 National Planning Policy Framework update, that Plans no longer needed to keep a 5% buffer of planned housing. In addition it is understood that many of the development sites are not commencing until 2031.

4.35 However, in 2024, the Labour Government were elected and have made a commitment to deliver 1.5 million homes over this parliament and are currently consuting on a methodolology for calculating housing need. This could impact on future housing projections and completions over the next few years and will need to be monitored inf future LAA's.

Population and Housing Growth Conclusion

4.36 It is clear that we need to continue consider the implications of population and housing growth on the minerals provision over the plan period.

Conclusion

4.37 The evidence available suggests that Economic Growth, Major Infrastructure Projects/Key Development and Population Growth and Housing within Oxfordshire will continue, if at a reduced pace, in the foreseeable future. The impact of a new Government, particularly on housing growth will be explored in future LAA's.

[21] District Authority Monitoring Reports.

5. Aggregate Provision Rates

5.1 The NPPF[22] states that Minerals Planning Authorities should plan for a steady and adequate supply of aggregates. One of the ways to do this is to prepare an annual Local Aggregate Assessment to forecast future demand, based upon a rolling average of 10 years sales data and any other relevant local information. To forecast and ensure that supply continues to meet demand, the Aggregates Provision Rate (APR) for each aggregate is set within the annual Local Aggregate Assessment.

Sharp Sand and Gravel Aggregate Provision Rate

5.2 The LAA APR for 2022 was changed to 0.986 mtpa, from the previous 1.015mpta which was originally established in the 2014 LAA and included within the adopted Core Strategy (2017). Earlier Local Aggregate Assessments saw no justification to change this figure, as growth in Oxfordshire saw demand continue to rise and looked likely to continue.

5.3 Sales in 2023 of sharp sand and gravel have decreased 9.8% in 2023 compared with 2022 (from 0.972mtpa to 0.877mtpa).

5.4 2023 saw a continued reduction in demand. The construction industry is anticipating a further small decline in 2024, with demand expected to rise again from 2025.

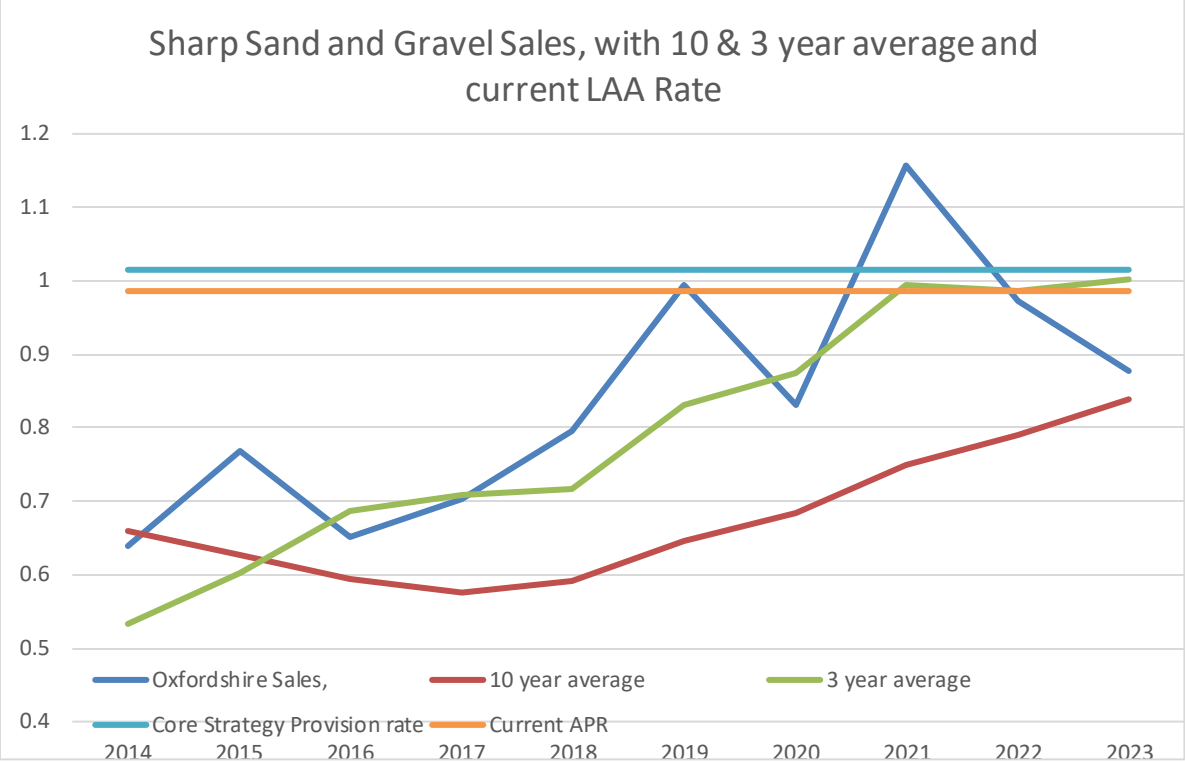
5.5 The 10 year sales average increased 6% (from 0.791 mtpa to 0.839mtpa) and the 3-year sales average (1.002mtpa) increased by 1.6% compared to the previous 3-year sales average of 0.986mtpa. The 3-year sales average is almost 20% higher than the 10-year average. In addition, sales are still the 4th highest in the last 10 years.

5.6 Our 10 year rolling average for sales data is 0.839mtpa, however as set out within Section 3 Demand, the start of the 10 year baseline period for sand and gravel included the end of the recession, followed by a number of sand and gravel sites waiting for permission.

5.7 Figure 5.1 shows actual Sharp Sand and Gravel sales compared with the average sales (mtpa), the 3 year Average/ Proposed Aggregates Provision Rate and the Core Strategy Provision rate.

Figure 5.1 Comparison of actual sharp sand and gravel sales compared with the average sales and the current LAA Aggregates Provision Rate (APR) and Core Strategy Provision levels (mtpa).

[22] National Planning Policy Framework (publishing.service.gov.uk)



5.8 Taking into account sales and Oxfordshire's consumption and exports alongside all the evidence, at this time there is no justification for a change in the Aggregates Provision Rate for Sharp Sand and Gravel from the current level of 0.986mtpa.

Soft Sand

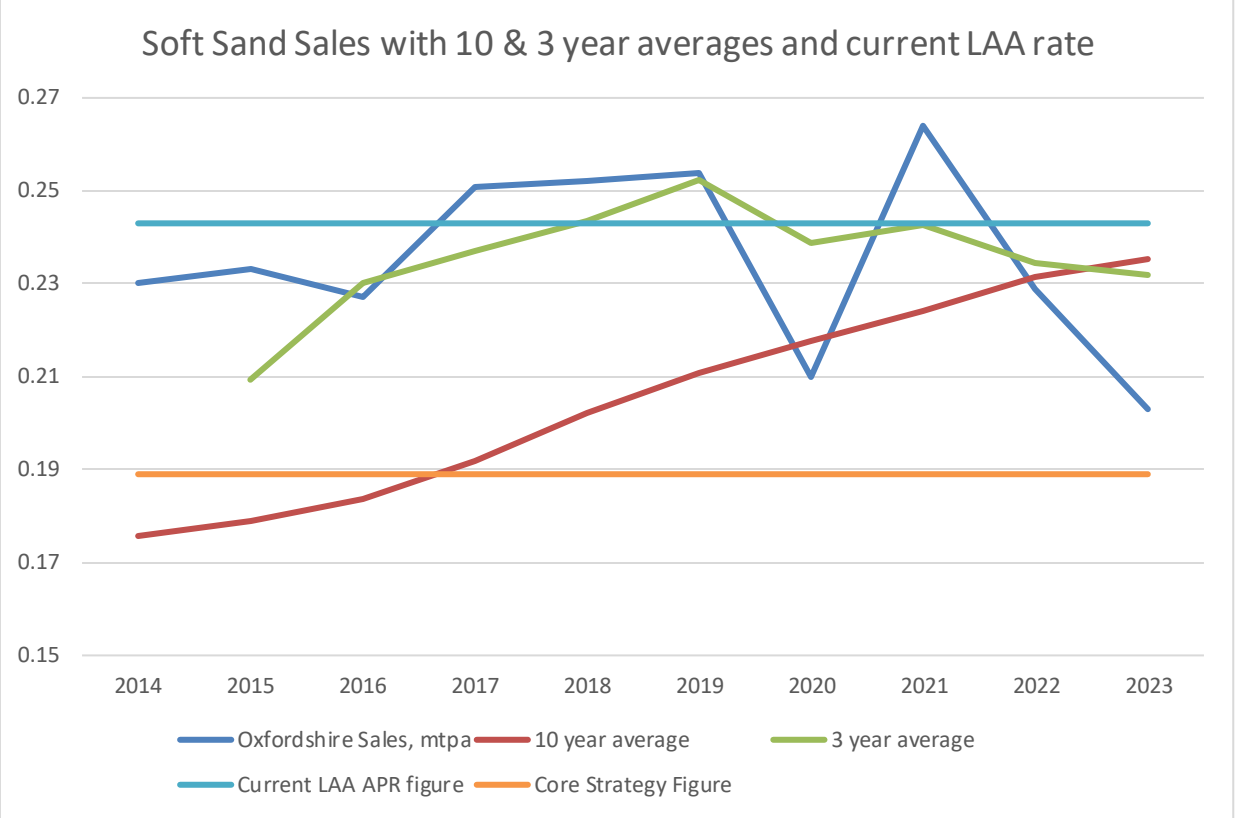
5.9 For soft sand, the Core Strategy included a provision figure of 0.189mtpa, which was set in the LAA 2014 on the basis of the 10-year sales average at that time.

5.10 This figure was updated in the LAA2019 to 0.243mtpa to reflect the consistently higher level of demand and following review of other evidence.

5.11 Sales in 2023 decreased again from 0.229mt in 2022 to 0.203mt, an 11% decrease and the lowest in the last 10 years. The 3-year sales average (0.232mtpa) saw a 1% decrease compared with the previous 3-year sales average (0.234mtpa), though there was a 1.6% increase in the 10-year sales average (from 0.232mtpa to 0.235mtpa).

5.12 The current 10 year average is 3.2% lower than the current APR of 0.243, and the 3 year average is 4.5% lower.

Figure 5.2 Comparison of actual Soft Sand sales compared with the average sales and the current LAA APR and Core Strategy Provision levels (mtpa).



5.13 In light of all the factors considered, including current sales, Oxfordshire's imports and exports, and all other evidence, it is considered that at this time, there is justification for a change in the Aggregates Provision Rate to the 10-year sales average of 0.235 mtpa to enable us to provide a steady and adequate supply of soft sand.

Crushed Rock

5.14 For crushed rock, the Core Strategy provision level figure of 0.584mtpa was set in the LAA 2014 on the basis of an upward adjustment of the 10-year sales average at that time.

5.15 This figure was updated in the LAA2019 to 0.778mtpa, in the LAA for 2021 to 0.824mtpa and then again in the LAA for 2022 to 0.914mtpa. These reflected the consistently higher level of demand and the review of other evidence.

5.16 Sales in 2023 saw a 12.6% decrease from 1.146 to 1.002mt, however sales are still over 1 million tonnes a year for the fourth consecutive year.

5.17 The 3-year sales average (1.134mtpa) was 2.4% lower than the previous 3-year sales average (1.162mtpa) however the 10 year average continued to increase with a 5.5% increase in 2023 (from 0.914mtpa to 0.964mpta). The 3-year and 10-year sales average remain higher than the current LAA 2022 APR of 0.914mtpa.

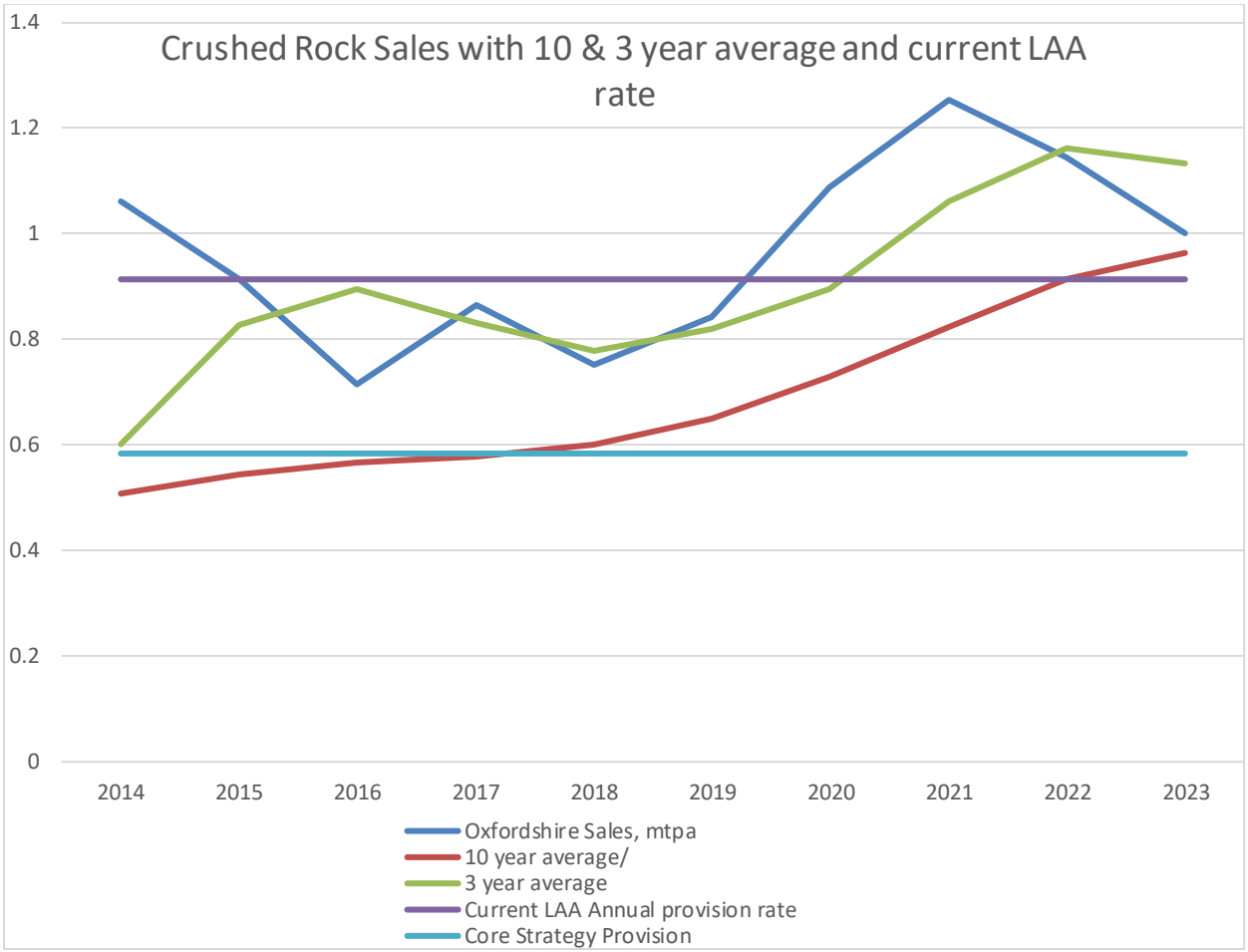


Figure 5.3 Comparison of actual Crushed Rock sales compared with the Aggregates Provision Rate/10 year average, 3 year average and Core Strategy Provision levels (mtpa).

5.18 Available evidence, especially in terms of large infrastructure project demand, indicates that demand for crushed rock is likely to continue.

5.19 Therefore, alongside this evidence, taking into account sales, Oxfordshire's consumption, imports andexports, it is considered that at this time, there is justification for a change in the Aggregates Provision Rate to the 10-year sales average of 0.964mtpa to enable us to provide a steady and adequate supply of crushed rock.

5.20 The Aggregates Provision Rate will therefore be increased to the 10-year average of 0.964mtpa.

Recycled and Secondary Aggregate & Rail Depots

5.21 In addition to setting provision level figures for local land-won aggregates, the LAA should also include provision levels for other relevant sources of aggregates supply to ensure that future demands are met. In the case of Oxfordshire these are recycled and secondary aggregates and aggregate rail depots.

5.22 In the case of recycled and secondary aggregates, the appropriate figure to maintain in this LAA is the provision rate set in the Oxfordshire Minerals & Waste Local Plan: Part 1 – Core Strategy (2017) policy M3. This is 0.926mtpa.

5.23 In the case of aggregate rail depots, due to confidentiality, we are unable to provide a LAA provision figure at this stage.

Conclusion for LAA provision figures

Sharp Sand and Gravel	**0.986mtpa**	**Unchanged from 2022**
Soft Sand	**0.235mtpa**	**Decreased from 2022 (0.243mtpa)**
Crushed Rock	**0.964mtpa**	**Increased from 2022 (0.914mtpa)**
Recycled and Secondary Aggregate	**0.926mtpa**	**Unchanged from 2022**

6.Supply

Oxfordshire Supply

6.1 Oxfordshire is rich in mineral resources. Those which are used for primary aggregate production comprise: extensive alluvial sand and gravel resources along the River Thames and its tributaries; smaller deposits of glacio-fluvial sand and gravels in the north east of the county; deposits of Soft Sand mainly in the south west; and extensive areas of limestone in the north west and of ironstone in the north.

6.2 Oxfordshire also produces some secondary aggregates and a wide range of recycled aggregate materials. Further detailed information of the geological resources of Oxfordshire can be found in the LAA2014 (LUC and Cuesta Consulting Limited).

Recycled and Secondary Aggregate

6.3 As discussed within the Demand section of this LAA, estimations of recycled and secondary aggregate have been made.

6.4 As the WDI for 2023 has not been released yet, this LAA is unable to calculate the Recycled and Secondary Aggregate figures for 2023, and latest figures are based upon 2022.

6.5 Using the Recycled Aggregate methodology with the secondary estimate for 2022, the Recycled and Secondary Aggregate figure for sales is estimated to be 0.443mt.

6.6 It is likely that these estimated 2022 figures are significantly less than the total actual production.

6.7 The actual capacity figures were likely to be significantly higher than the recorded figures.

6.8 Table 6.1 below presents a fuller picture, showing the estimated[23] capacity for the production of recycled and secondary aggregates at each site at the end of 2023, sub-divided between operational and non-operational sites.

6.9 Of a total capacity of approximately 1.523.mtpa: 1.488mtpa is at operational facilities and 0.035mtpa is currently non-operational. Of the operational capacity, that which is at sites with planning permission to the end of the plan period (2031) or beyond is 1.031mtpa, whereas the capacity of sites with permissions that expire before the end of 2031 is 0.270mpta.

6.10 In 2023 Dix Pit (MW.0059/19) was granted permission for an additional 0.020tpa until 2028. At the end of 2023, there was an outstanding application

[23] Taken from Survey responses, Planning Decisions and Planning Application Statements.

at Old Coal Yard (MW.0088/23) for a recycling facility, up to 30,000tpa, which would accept CD&E arisings.

Facility Name	Operator	Planning Life	Production Capacity (tpa)
Operational Recycled Aggregate Production Facilities with Permanent consent or Time Limited Consent to end of Plan Period (2031)			
Drayton	Oxfordshire Highways	Permanent	75000
Ferris Hill Farm	Banbury Plant and Skip Hire (incorporating NL Matthews)	Permanent	24999
Grove Industrial Park	Aasvogel	Permanent	40000
Hundridge Farm	G.D. Parker Instant Skip Hire	Permanent	5000
Lakeside Industrial Park	Micks Skips and Recycling Ltd.	Permanent	2000
New Barn Farm	Grundon	2037	10000
New Wintles Farm	O Malley Haulage	Permanent	170000
Newlands Farm	Smiths of Bloxham	Permanent	32000
Playhatch Quarry	Grabloader Ltd.	Permanent	70000
Rear of Cemex Batching Plant (Hardwick)	Fergal Contracting	Permanent	20000
Rumbolds Pit	Richard Hazel (Hazel & Jefferies)	Permanent	20000
Sandfields Farm	K J Millard Ltd.	Permanent	12000
Shipton Hill	Hickman Bros	Permanent	12600
Stonepitt Barn	SCB Oxford Ltd	Permanent	75000
Worton Farm (Cresswell Field)	M&M Skip Hire	Permanent	60000
Swannybrook	NAP Grabhire	Permanent	80280
Chilton Waste Transfer Site/Prospect Farm	Raymond Brown Minerals and Recycling Ltd.	2032	75000
Gill Mill	Smith and Sons (Bletchington) Ltd.	2040	175000
Ewelme No. 2	Grundon Waste Management	2032	12000
Shellingford Quarry	Earthline Ltd.	2044	60000

Total Operational Production Capacity at Recycled Aggregate Production Facilities available through the Plan Period.	**1,030,879**

Operational Recycled Aggregate Facilities with Time-Limited Consent ending before end of Plan Period (2031)			
Dix Pit Complex	Sheehan's	2028	175000
Shipton Quarry	Earthline Ltd.	2025	75000
Dix Pit	D&M Plant Hire	2028	20000
Total Operation Production Capacity at Recycled Aggregate Facilities with Time limited consent ending before end of Plan Period (2031)			**270,000**

Facility Name	**Operator**	**Planning Life**	**Production Capacity (tpa)**
Operational Secondary Aggregate Facilities with Permanent or Time-Limited Consent to end of Plan Period (2031)			
Ardley ERF (IBAA) Facility	Fortis	2049	75000
Operational Secondary Aggregate Facilities with Time Limited Consent ending before end of Plan Period (2031)			
Sutton Courtenay Block Recycling	Hanson (reject building blocks & Concrete used in block making)	2030	62500
Sutton Courtenay Asphalt Recycling Plant	Hanson	2030	50000
Total Operational Secondary Aggregate Capacity			**187,500**

Overall Total Operational Capacity at 'Permanent' Facilities (facilities available throughout the Plan Period)	**1,105,879**

Overall Total Operational Capacity at Time Limited Facilities (facilities with consent ending before end of 2031)	**382,500**
Overall Total Operational Capacity	**1,488,379**

Non Operational Facilities

Facility Name	Operator	Planning Life	Production Capacity (tpa)
Upwood Quarry	Hills Quarry Products Ltd.	2029	15000
NW Corner of TW Depot	Clancy Docwra	Permanent	20000
Total Non Operational Capacity			**35000**

Operational and Non-Operational Facilities

Total Operational and Non-Operational Capacity 2021 (tpa)	1,523,379

Table 6.1 Recycled and Secondary Aggregates Permissions at end of 2023

Imports and Exports

6.11 Every county in the UK has to import aggregates from elsewhere because the geology means that no single county area produces exactly the profile of different types of aggregate in the exact amounts or proportions consumed therein. As part of the Local Aggregate Assessment, we should consider demand and supply factors from other MPAs.

6.12 All sales of aggregate are the result of commercial decisions by both buyers and sellers and the resulting movements reflect the relative locations of supply and demand. Where these movements cross a county boundary, they are tracked in the four (or five) yearly national aggregates monitoring surveys (AM Survey), these have been 2005, 2009, 2014, 2019 and 2023 (we are still awaiting the results of the 2023 survey to be published). Until this point the most recent details on imports and exports is from the 2019 survey. This survey is known as AM2019.

6.13 The 2019 Aggregates Minerals Survey for England and Wales was published in August 2021. The figures within this Imports and Exports section of the LAA 2020 were taken from the AM2019 which shows movement of minerals at a sub-regional and Minerals Planning Authority level. These are set out in detail in Appendix 2.

6.14 AM2019 stated that overall Sand and Gravel sales in England have decreased by 4% between 2014 and 2019, whilst Crushed Rock sales increased 18% between 2014 and 2019.

6.15 Oxfordshire however, has increased in Land won Sand and Gravel sales by 44% since 2014, though sales in Crushed Rock have decreased by 20%.

6.16 Total primary aggregate sales within Oxfordshire have increased by 8% since 2014, however the South East as a whole has seen an overall decrease of 7% in total primary aggregate sales.

6.17 Some neighbouring MPAs have limited resources of their own. These authorities therefore rely on Oxfordshire to supply some of their needs. Other MPAs have traditionally supplied aggregates into Oxfordshire; Somerset, South Gloucestershire and Leicestershire have previously provided Crushed Rock to supplement the county's own production and to cater for higher specification requirements from harder rock resources.

6.18 The AM2019 sets out the sales of primary aggregates by MPA and principal destination sub region in 2019. These findings are shown in Table 6.2. As the table shows Oxfordshire was responsible for 20% of the South East Regions Land Won Sand and Gravel Sales and 42% of the Crushed Rock sales in 2019. This does not include that mineral that was unallocated or went elsewhere. They are also set out in Appendix 2.

(thousand tonnes)

Destination	Land won sand and gravel	MPA%	AWP%	Crushed Rock	MPA	AWP%
Oxfordshire	772	62%		260	31%	
South East	369	30%[24]		404	48%	
Elsewhere	43	3%		178	21%	
Unallocated	64	5%				
	1,248	100%	20%	843	100%	42%

Table 6.2 Sales of primary aggregates and principal sub regions 2019 (Exports)

6.19 The AM2019 also sets out Oxfordshire's imports in 2019. A summary of the import findings is shown in Table 6.3. The table also shows as a percentage, of the South East total, Oxfordshire's imports.

(thousand tonnes)

Total Imports	Land won Sand and Gravel	Marine Sand and Gravel	Total Sand and Gravel	Crushed Rock	Total Primary Aggregate
Oxfordshire	128	7	136	356	491[25]
South East Total	2,268(6%)	1,962(0.3%)	3,950(3%)	5,8084 (0.6%)	9,754(5%)

Table 6.3 Imports of primary aggregates and its relationship with the South East Imports Total

6.20 The AM Survey 2019 (Tables 6.2, 6.3 and Appendix 2) shows that Oxfordshire is now a net exporter of both Land won Sand and Gravel and Crushed Rock.

Sharp Sand and Gravel

6.21 The AM2019 does not differentiate between Soft Sand and Sharp Sand and Gravel. They are combined into Land won Sand and Gravel.

6.22 Comparison of the AM2009, AM2014 and AM2019 results show that Oxfordshire continues to be a net exporter of sand and gravel since 2014.

Exports

6.23 Exports have significantly increased since 2009. From 140,000 in 2009, doubling to 221,000 tonnes in 2014, and in 2019 doubling again to 476,000 tonnes.

6.24 Oxfordshire consumed 62% of the sand and gravel produced in the county. Exports make up approximately 38%[26] of Oxfordshire's total sand and gravel

[24] There appears to be a print error in the AM2019 survey as has this figure as 60% but doesn't reflect 369,000 tonnes as a total 1,248,000 tonnes. Recalculated for this LAA as 30%

[25] This should be 492 as 136 add 356 is not 491

[26] The figures include the 5% that was unallocated and some of these sales may have stayed within Oxfordshire.

sales. The majority of exports were within the South East (30%) whilst 3% went elsewhere and 5% was unallocated on the Survey returns. There is the potential for some of this to have been used in Oxfordshire.

6.25 As set out in Appendix 2 the figures from the AM2019 show that Hampshire and the Isle of Wight were one of the main authorities that Oxfordshire exported Sand and Gravel to, along with, Buckinghamshire & Milton Keynes. Hampshire and Isle of Wight's imports from Oxfordshire made up between 10 and 20% of their own total sand and gravel consumption.

Imports

6.26 Whilst we exported 476,000 tonnes of Land won Sand and Gravel, Oxfordshire imported 128,000 tonnes, up slightly from 117,000 tonnes in 2014. This was mainly from Cambridgeshire, Lincolnshire, Staffordshire and Wiltshire as Oxfordshire imported between 1% and 10% of the total consumed from each of these Authorities.

6.27 In total Oxfordshire made up 6.3% of the Sand and Gravel imports into the South East Region.

Crushed Rock

Exports

6.28 Appendix 2 shows that Oxfordshire changed from a net importer of Crushed Rock in 2014 to a net exporter in 2019. Oxfordshire exported 0.582mt of its total 0.843mt of Crushed Rock in 2019, compared with importing 0.356mt from outside the County. This is a change from 2014 where OCC was a net importer as 0.787mt was imported, compared 0. 347mt exported.

6.29 Table 6.3 shows that exports make up approximately 69% of Oxfordshire's total sales. The majority of exports were to destinations within the South East (48%) whilst 21% went elsewhere.

6.30 As set out in Appendix 2 the figures from the AM2019 show that Northamptonshire was one of the main Authorities that Oxfordshire exported Crushed Rock to, along with, Buckinghamshire & Milton Keynes, Warwickshire and Berkshire. Imports of Crushed Rock from Oxfordshire made up between 1 and 20% of their own total Crushed Rock consumption.

6.31 Imports and in particular exports, in light of the quantity of minerals exported in 2019 will therefore need to be given great consideration in planning for future provision.

6.32 These shall be monitored under Duty to Cooperate and, if necessary, Statements of Common Ground between Authorities will be entered into.

7.Quarries

Sharp sand and gravel

7.1 In Oxfordshire, at the end of 2023, there were 11 sites with planning permission for Sharp Sand and Gravel extraction. Eight of which are active, two are inactive, one in suspension. One site has ceased extraction and is in restoration.

7.2 One planning permission was granted in 2023 for 128,000 tonnes of Sharp Sand and Gravel at Oday Hill, Sutton Wick (MW.0104/20) .

7.3 There were four outstanding decisions at the end of 2023, White Cross Farm in Wallingford for 550,000 tonnes (MW.0115/21), Oxfordshire Flood Alleviation scheme (MW.0027/22) for 12,300 tonnes (incidental and not to be sold off site), Finmere Quarry extension (MW.0069/20) for 370,000 tonnes and Land at Thrupp Lane, Radley (MW.0041/23), which is for a reactivation of dormant planning permission for 1 million tonnes.

7.4 The permission for Stonehenge Farm, for 1.5 million tonnes expired at the end of 2023, and any working of this site will now require permission, therefore the 1.5 million tonnes at this site is removed from the sand and gravel reserve.

7.5 In addition, Wroxton Quarry, a crushed rock site, has had soft sand and sharp sand and gravel sales in 2023 and identified reserve.

7.6 Information on permitted sites is summarised in Table 7.1, including the operator and a summary of the current status of each site.

Quarry Site	**Operator**	**Current Status at December 2023**
Cassington	Hanson Aggregates	Extraction ceased at end of 2022. In restoration.
Caversham	Lafarge Tarmac	Active: extension of 1.86 million tonnes permitted August 2014; commenced August 2017.
Finmere	AT Contracting	Inactive: Intermittent small scale past working; reserve remaining.
Gill Mill, Ducklington	Smiths of Bletchington	Active: biggest quarry in county.
Hatford	Earthline	Active: Permitted for SSG, SS and CR in 2021. 225,000tonnes of S&G
Sutton Courtenay (Bridge Farm)	Hanson Aggregates	Inactive: Extension of 0.5 million tonnes permitted June 2018.

Quarry Site	Operator	Current Status at December 2023
Sutton Wick	H Tuckwell & Sons	Active: Permission granted for an additional 128,000 tonnes in 2023
Thrupp Lane, Radley	H Tuckwell & Sons	Inactive: Estimated 1 million tonnes confirmed as a permitted reserve but under ROMP procedure has gone into suspension and cannot be worked until new conditions have been approved; therefore not currently included as part of permitted reserve or landbank. A ROMP application was received in 2023 and is awaiting determination.
Wroxton Quarry	Earthline	Active: Previously a crushed rock site, but recently has sharp sand and gravel and soft sand sales and identified reserve.
Faringdon Quarry	Grundon Sand & Gravel	Active: new quarry permitted June 2013 (formerly regarded as extension to Wicklesham Quarry). Extension to 2035 granted in 2022.
New Barn Farm, Cholsey	Grundon	Active: Permitted for 2,500,000tonnes in November 2018. Extraction commenced in 2020
Shellingford	Multi Agg Ltd	Active. Also has SS and CR deposits on site.

Table 7.1 Active and Permitted Sharp Sand and Gravel Extraction Sites in Oxfordshire, including Operators and Current Status (Source: OCC)

7.7 Total permitted reserves of Sharp Sand and Gravel in Oxfordshire at the end of 2023 were 7.693mt, as shown in Table 7.2 below. This is taken from the AM2023 survey calculated using annual operator returns. The actual operator returns for individual quarries cannot be presented due to confidentiality.

7.8 Production capacity is also relevant, as a large amount of reserve in a quarry with only a low production rate will make a smaller contribution to annual supply than equivalent reserves in a high producing quarry. The 2023 Annual Monitoring Survey did not request production capacity, therefore production capacity has been established through responses to previous surveys, planning permissions and submitted planning statements.

7.9 At the end of 2023 total permitted production capacity at the end of 2023 for sharp sand and gravel was 1.409mtpa.

Sharp Sand and Gravel Permitted Reserves at 31/12/22
7.693mt

Table 7.2: Sharp Sand and Gravel Permitted Reserves at 31/12/23 (million tonnes)

Soft Sand

7.10 In Oxfordshire, at the end of 2023, there were eight sites with planning permission for Soft Sand extraction, with one currently inactive. The operator and current status of each site is provided in Table 7.4.

7.11 No planning permissions were granted for soft sand sites in 2023.

Quarry Site	Operator	Current Status at December 2023
Bowling Green / Chinham Farm	Hills Quarry Products	Active: sand & limestone; extension of 1.6 million tonnes sand permitted June 2017; large remaining reserve.
Duns Tew	Smiths Bletchington	Active: extension of 0.415 million tonnes permitted June 2017.
Hatford	Earthline Ltd	Active: sand & limestone. Permission granted in 2021 for Limestone 0.520mt, Sharp Sand 0.225mt tonnes, Soft Sand 0.130mt
Shellingford	Earthline Ltd	Active: sand & limestone; permissions granted April 2011 for deepening and eastern extension, total 1.05 million tonnes sand, requires extraction to end by 31.12.20 in eastern extension and 31.12.28 in existing quarry. Application granted at end of 2019 for 1.8mt of Soft Sand and 1mt of crushed rock.
Upwood	Hills Quarry Products	Active: sand & limestone; large remaining reserve.
Finmere	AT Contracting	Inactive: Intermittent small scale past working; reserve remaining. Application outstanding
Gill Mill	Smiths Bletchingdon	Active: A sharp sand and gravel site, with incidental soft sand
Wroxton	Earthline Ltd	Active: A crushed rock site with some sand deposits

Table 7.3 Active and Permitted Soft Sand Extraction Sites in Oxfordshire, including Operators and Current Status

7.12 Total permitted reserves of Soft Sand in Oxfordshire at the end of 2023 were 3.288mt, as shown in Table 7.4 below. This is taken from AM2023 survey, calculated using annual operator returns. The actual operator returns for individual quarries cannot be presented due to confidentiality.

7.13 However, total production capacity is also relevant, as a large amount of reserve in a quarry with only a low production rate will make smaller contribution to annual supply than equivalent reserves in a high producing

quarry. The current reserves are spread across a number of operators rather than one main one and production capacity at the end of 2023 is 0.309mtpa.

Soft Sand Permitted Reserves at 31/12/23
3.288 mt

Table 7.4: Soft Sand Permitted Reserves at 31/12/23 (million tonnes)[27]

Crushed Rock

7.14 In Oxfordshire at the end of 2023, there are 12 sites with planning permission for Crushed Rock extraction. The operator and current status of each site is provided in Table 7.5.

7.15 There were no new permissions for crushed rock sites granted in 2023.

7.16 There are four applications for Crushed Rock outstanding at the end of 2023. Whitehill Quarry (MW.0157/22) for 3 million tonnes, Dewars Farm (MW.0049/23) for 3.6 million tonnes, Mullin Borrow Pit (MW.0070/23) for 370,800 tonnes and a retrospective application for 500,000 tonnes at Shipton on Cherwell.

Quarry Site	Operator	Current Status at December 2023
Dewars Farm	Smiths Bletchington	Active; limestone
Burford	Smiths Bletchington	Active; limestone
Chinham Farm (Bowling Green)	Hills Quarry Products	Active; sand and limestone
Land at Quarry Farm North, Enstone	Great Tew Farms Partnership	Active; limestone
Duns Tew	Smiths Bletchington	Active; sand with small amounts of limestone
Faringdon Quarry	Grundon Sand and Gravel	Active; sand & gravel with small amounts of limestone
Hatford	Hatford Quarry Ltd (Earthline)	Active; soft sand, sand & gravel and limestone.

[27] SEEAWP Aggregates Monitoring Survey 2023

Quarry Site	Operator	Current Status at December 2023
Rollright Quarry Phase 1	Oxfordshire Quarries Group	Active; limestone. Limited production capacity by lorry movements
Rollright Quarry Phase 2	Smiths Bletchington	Restoration in progress
Shellingford	Multi-Agg Ltd (Earthline)	Active; sand and limestone; Application granted in 2020 (MW.0104/18) for 1.8mt of Soft Sand and 1mt of crushed rock.
Shipton on Cherwell	Earthline	Planning permission expired 30th September 2019. Appeal outstanding for extension to site MW.0046/18
Upwood	Hills Quarry Products	Active; sand and limestone
Whitehill	Smiths Bletchington	Active; limestone
Wroxton	Earthline	Active; ironstone

Table 7.5 Active and Permitted Crushed Rock Extraction Sites in Oxfordshire, including Operators and Current Status

7.17 Total permitted reserves of Crushed Rock in Oxfordshire at the end of 2023 were 4.744 mt, as shown in Table 7.6 below. This is taken from the AM2023 Survey, calculated using annual operator returns. The actual operator returns for individual quarries cannot be presented due to confidentiality.

7.18 However, total production capacity is also relevant, as a large amount of reserve in a quarry with only a low production rate will make smaller contribution to annual supply than equivalent reserves in a high producing quarry. Total permitted production capacity for crushed rock at the end of 2023 was 1.689mtpa.

7.19 Permitted reserves of Crushed Rock in Oxfordshire, as reported in the SEEAWP Aggregates Monitoring Survey 2023, are shown in Table 7.6 below.

Crushed Rock Permitted Reserves at 31/12/22
4.744mt

Table 7.6: Crushed Rock Permitted Reserves at 31/12/23 (million tonnes)[28]

Rail Depots

7.20 In 2023, there were no returns from operators on sales from Rail Depots.

7.21 However, due to a number of planning decisions in 2021, Oxfordshire has increased Oxfordshire's rail depot capacity to over 3.5million. It is known that the increased capacity at Hennef Way Banbury is temporary to provide material for HS2, and Appleford Sidings has added two more rail sidings. This site now has a condition limiting it to 1.5million tonnes per annum.

Landbanks

7.22 Based on the Aggregates Provision Rates set out in Section 5 that have been determined for this LAA and the permitted reserves as at 31 December 2023, as set out above, the landbanks at the end of 2023 can be seen below in Table 7.7.

Permitted Reserves at 31.12.2023 by mineral type	Landbank (LAA Aggregates Provision Rate)
Soft Sand 3.288m. tonnes	14 years at 0.235mtpa
Sharp Sand & Gravel 7.693m. tonnes	7.8 years at 0.986mtpa
Crushed Rock 4.744m. tonnes	4.9years at 0.964mtpa

Table 7.7 Oxfordshire Landbank at 31/12/2023

7.16 As can be seen the Landbanks for Sharp Sand and Gravel and Soft Sand have the 7 years required however the Crushed Rock landbank falls below the 10-year requirement for the sixth consecutive year.

[28] AM2023 Survey

8. Core Strategy Mineral Requirements

8.1 The Minerals and Waste Local Plan Part 1: Core Strategy (Policy M2) sets out the total provision requirement of minerals for the Plan Period 2014-2031. These are:

- 18.27 million tonnes of Sharp Sand and Gravel
- 3.402 million tonnes of Soft Sand; and
- 10.512 million tonnes for Crushed Rock

Sharp Sand and Gravel

8.2 Taking into account sales in 2014 – 2023 (8.387 total million tonnes), and reserves that are expected to be worked during the plan period (7.234 million tonnes), the remaining Core Strategy Requirement over the Plan Period is 2.649 million tonnes. See Appendix 3 for calculations.

Soft Sand

8.3 Taking into account sales of Soft Sand in 2014 – 2023 (total 2.353 million tonnes), and reserves that are expected to be worked during the plan period 1.100 million tonnes), there are no more requirements for additional Soft Sand to meet Core Strategy Requirements over the Plan Period. See Appendix 3 for calculations.

Crushed Rock

8.4 Taking into account sales in 2014 – 2023 (total 8.638 million tonnes), and reserves that are expected to be worked during the plan period (5.275 million tonnes), are no more requirements for additional Crushed Rock to meet Core Strategy Requirements over the Plan Period.

8.5 Therefore, to meet the Core Strategy Requirements, we will need to identify sites to meet the following:

- **Sand and Gravel – 2.649 million tonnes**
- **Soft Sand - 0 million tonnes**
- **Crushed Rock - 0 million tonnes**

9. Conclusion

8.1 In concluding this years Oxfordshire's LAA, based upon consideration of all the available evidence, the Aggregates Provision Rates are:

- **Sand and Gravel – 0.986 mtpa**
- **Soft Sand – 0.235mtpa**
- **Crushed Rock – 0.964mtpa**
- **Recycled and Secondary Aggregates- 0.926mtpa**

8.2 To meet the Core Strategy Requirements as set out in Policy M2, we will need to identify sites to meet the following need:

- **Sand and Gravel – 2.649 million tonnes**
- **Soft Sand - 0 million tonnes**
- **Crushed Rock - 0 million tonnes**

8.3 To ensure we maintain a steady and adequate supply over the Plan Period, we need to consider these LAA Provision Rates with the permitted reserves as of 31 December 2023[29] and the implications for the Authorities landbank.

8.4 Our landbank for Soft Sand and Sharp Sand and Gravel are both above the 7-year requirement. However, for Crushed Rock the landbank is at 4.9 years, below the NPPFs 10-year requirement.

8.5 To address this issue, in December 2022, it was agreed to commence with a New Minerals and Waste Plan for Oxfordshire.

8.6 This new Plan will consider mineral requirements for all aggregates over the new Plan period during its preparation.

8.7 Mineral requirements within the adopted Core Strategy will be replaced with the mineral requirements set out within the new Minerals and Waste Plan upon adoption.

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[29] Appendix 2

9. List of Definitions and Acronyms

The Local Aggregate Assessment uses the following terminology throughout this report:

- **Alternative aggregates** - A general term which can be used to refer to anything other than primary, land-won aggregates. It can include secondary, recycled and sometimes marine aggregates.
- **Landbank** - Landbank is a measure of the stock of permitted reserves expressed in terms of the number of years that these would allow production for at a given average rate of extraction. It is a theoretical measure of the life of the reserves if these were to be worked at a consistent annual rate.
- **Land-won aggregates** - Primary aggregates extracted from land.
- **Marine aggregates** - Primary aggregates dredged from the sea, almost exclusively sand and gravel.
- **Primary aggregates** - These are aggregates produced from naturally occurring mineral deposits, extracted specifically for use as aggregate and used for the first time. They are produced either from rock formations that are crushed to produce 'crushed rock' aggregates, from naturally occurring sand and gravel deposits, or solid formations to produce soft sand.
- **Aggregate Provision Rate (APR)** - the quantity of aggregate for which provision needs to made in plans within each Mineral Planning Authority in order both to satisfy local needs and to contribute fairly towards National expectations of future demand
- **Recycled aggregates** - Aggregate materials recovered from construction and demolition processes and from excavation waste on construction sites.
- **Secondary aggregates** - Aggregates derived as a by-product of other quarrying and mining operations or industrial processes, including colliery spoil, china clay waste, slate waste; power station ashes, incinerator bottom ashes and similar products.
- **Sharp Sand and Gravel -** Sharp sand tends to be relatively coarse and the component grains are more angular than soft sand (see below). Such sands are typically deposited within river channels, rather than in oceans, and are generally found, as part of a sequence of mixed sand & gravel, within river floodplains, river terraces, and (in areas which have been glaciated) within other types of deposit. As the name implies they have a sharper texture than soft sands and, although they can be used as building sand, they are generally not preferred for that purpose because they produce less 'workable' mortars, unless special additives are included in the mix, adding to the cost. They are better suited to use within concrete products, not least because they usually occur in conjunction with gravels which provide the coarse aggregate component of the concrete mix.
- **Soft Sand** - Soft Sand is generally fine-grained sand in which the individual grains are well-rounded, imparting a relatively soft texture and free-flowing nature to the sand. Such sands are commonly deposited in marine environments, where constant movement by the sea results in the rounding,

polishing and sorting of the grains. The characteristics of such sands lend themselves especially to products which are required to 'flow' or be easily 'workable' by hand when they are being used - particularly mortars, but also plaster, in the case of very fine grained sand. These are collectively known as 'building sand'. Soft Sand may also be used in asphalt products where it is used to stiffen the bitumen binder, and in concrete products - although sharp sand is more commonly used for that purpose.

The Local Aggregates Assessment uses the following acronyms throughout this report:

- **AMRI** – Annual Minerals Raised Inquiry Surveys
- **APR** – Aggregate Provision Rate
- **AWP** – Aggregate Working Party
- **BGS** – British Geological Survey
- **CLG –** Communities and Local Government (See MHCLG below)
- **DLUHC** – Department of Levelling Up, Housing and Communities
- **GDP –** Gross Domestic Product
- **LAA** – Local Aggregates Assessment
- **MASS** – Managed Aggregates Supply System
- **MPAs** – Mineral Planning Authorities
- **Mt** – Million tonnes
- **mtpa** – Million tonnes per annum
- **MHCLG –** Ministry of Housing, Communities and Local Government
- **MWLP** – Minerals and Waste Local Plan
- **NPPF** – National Planning Policy Framework
- **OCC** – Oxfordshire County Council
- **PPG** – Planning Practice Guidance
- **RAWP** – Regional Aggregate Working Parties
- **ROMP** – Review of Old Mineral Permissions
- **SEEAWP** – South East of England Aggregate Working Party
- **SHMA –** Strategic Housing Market Assessment

Appendix 1

Total Oxfordshire Sand and Gravel Sales (including Soft Sand)

(Source: AM Surveys and SEEAWP Surveys)

The AM2019 did not include a separate England total for Soft Sand for 2019, therefore for comparative purposes we have combined the historical records for Sharp Sand and Gravel and Soft Sand to be able to compare the 2019 figure with previous years.

	Oxfordshire Sharp Sand & Gravel Sales (million tonnes)[30]	**Oxfordshire Soft Sand Sales (million tonnes)[31]**	**Total Oxfordshire Land won Sand and Gravel (million tonnes)**	**England Total Land Won Sand and Gravel (million tonnes)**	**Oxfordshire's sales as a percentage of England's sales [32]**
2003	1.372	0.234	1.479	59.974	2.47%
2004	1.184	0.295	1.289	62.735	2.05%
2005	1.090	0.199	1.166	58.926	1.98%
2006	0.983	0.183	1.059	56.148	1.89%
2007	0.893	0.166	0.78	54.512	1.43%
2008	0.629	0.151	0.627	50.134	1.25%
2009	0.462	0.165	0.597	37.81	1.58%
2010	0.455	0.142	0.69	36.723	1.88%
2011	0.489	0.201	0.714	36.589	1.95%
2012	0.559	0.155	0.566	33.229	1.79%
2013	0.401	0.165	0.869	35.855	2.42%
2014	0.639	0.230	1.001	38.785	2.58%
2015	0.768	0.233	0.878	2015 figures not available	n/a

[30] Source: SEEAWP Aggregates Monitoring Surveys
[31] SEEAWP Aggregates Monitoring Surveys
[32] Figures include data for marine dredged material. This data is allocated to the county in which the port of landing is situation.

	Oxfordshire Sharp Sand & Gravel Sales (million tonnes)[30]	Oxfordshire Soft Sand Sales (million tonnes)[31]	Total Oxfordshire Land won Sand and Gravel (million tonnes)	England Total Land Won Sand and Gravel (million tonnes)	Oxfordshire's sales as a percentage of England's sales [32]
2016	0.651	0.227	0.954	2016 figures not available	n/a
2017	0.703	0.251	1.048	2017 figures not available	n/a
2018	0.796	0.252	1.133	2018 figures not available	n/a
2019	0.994	0.254	1.248	39.708	3.14%
2020	0.830	0.210	1.040	2020 figures not available	n/a
2021	1.157	.264	1.421	2021 figures not available	n/a
2022	0.972	0.229	1.201	2022 Figures not available	n/a
2023	**0.877**	**0.203**	**1.008**	**2023 Figures not available**	**n/a**
Rolling 10 year annual average, 2003 - 2012	0.812	0.182	0.891	40.433	2.01%
Rolling 10 year annual average, 2004 - 2013	0.715	0.176	0.839	38.629	1.85%
Rolling 10 year annual average, 2005 - 2014	0.660	0.179	0.812	36.853	1.79%

	Oxfordshire Sharp Sand & Gravel Sales (million tonnes)[30]	Oxfordshire Soft Sand Sales (million tonnes)[31]	Total Oxfordshire Land won Sand and Gravel (million tonnes)	England Total Land Won Sand and Gravel (million tonnes)	Oxfordshire's sales as a percentage of England's sales [32]
Rolling 10 year annual average, 2006 – 2015	0.628	0.184	0.787	n/a	n/a
Rolling 10 year annual average, 2007 – 2016	0.595	0.192	0.778	n/a	n/a
Rolling 10 year annual average, 2008 – 2017*	0.576	0.202	0.822	n/a	n/a
Rolling 10 year average 2009 – 2018	0.592	0.230	0.923	n/a	n/a
Rolling 10 year average 2010 – 2019	0.646	0.211	0.857	n/a	n/a
Rolling 10 year average 2011 – 2020	0.683	0.218	0.901	n/a	n/a
Rolling 10 year average 2012 – 2021	0.750	0.224	1.016	n/a	n/a
Rolling 10 year average 2013 – 2022	0.791	0.232	1.023	n/a	n/a
Rolling 10 year average 2014 – 2023	0.839	0.235	1.074	n/a	n/a
Average of last 3 years 2014 – 2016	0.686	0.230	0.95	n/a	n/a

	Oxfordshire Sharp Sand & Gravel Sales (million tonnes)[30]	Oxfordshire Soft Sand Sales (million tonnes)[31]	Total Oxfordshire Land won Sand and Gravel (million tonnes)	England Total Land Won Sand and Gravel (million tonnes)	Oxfordshire's sales as a percentage of England's sales [32]
Average of last 3 years 2015 – 2017	0.707	0.237	0.717	n/a	n/a
Average of last 3 years 2016 - 2018	0.717	.243	0.96	n/a	n/a
Average of last 3 years 2017- 2019	0.831	.252	1.083	n/a	n/a
Average of last 3 years 2018- 2020	0.873	.239	1.112	n/a	n/a
Average of last 3 years 2019- 2021	.994	0.243	1.237	n/a	n/a
Average of last 3 years 2020- 2022	.986	0.234	1.221	n/a	n/a
Average of last 3 years 2021- 2023	1.002	0.232	1.234	n/a	n/a

Oxfordshire's Historical Mineral Sales

Historical Sharp Sand and Gravel 2003-2023 (million tonnes) with England Sand and Gravel sales

(Sources: SEEAWP Aggregates Monitoring Surveys, and AMRI Surveys)

	Oxfordshire Sharp Sand & Gravel Sales (million tonnes)[33]	**England Sharp Sand & Gravel Sales (million tonnes)[34]**	**Oxfordshire's sales as a percentage of England's sales [35]**
2003	1.372	48.674	2.82%
2004	1.184	51.591	2.29%
2005	1.090	48.109	2.27%
2006	0.983	46.316	2.12%
2007	0.893	44.52	2.01%
2008	0.629	41.527	1.51%
2009	0.462	31.705	1.46%
2010	0.455	31.794	1.43%
2011	0.489	31.392	1.56%
2012	0.559	28.702	1.95%
2013	0.401	30.634	1.31%
2014	0.639	33.831	1.89%
Rolling 10 year annual average, 2003 - 2012	0.812	40.433	2.01%
Rolling 10 year annual average, 2004 - 2013	0.715	38.629	1.85%
Rolling 10 year annual average, 2005 - 2014	0.660	36.853	1.79%

[33] Source: SEEAWP Aggregates Monitoring Surveys

[34] Source: Mineral Extraction in Great Britain survey, Table 2 "Sand and Gravel for Construction". Please note that 2014 is the most recent published report.

[35] Figures include data for marine dredged material. This data is allocated to the county in which the port of landing is situation.

Historical Sales of Soft Sand 2003–2014(million tonnes) with England Sand and Gravel sales
(Sources: SEEAWP Aggregates Monitoring Surveys, and AMRI Surveys)

	Oxfordshire Soft Sand Sales (million tonnes)[36]	**England Soft Sand Sales (million tonnes)[37]**	**Oxfordshire's sales as a percentage of England's sales.**
2003	0.234	11.300	2.07%
2004	0.295	11.144	2.65%
2005	0.199	10.817	1.84%
2006	0.183	9.832	1.86%
2007	0.166	9.992	1.66%
2008	0.151	8.607	1.75%
2009	0.165	6.105	2.70%
2010	0.142	4.929	2.88%
2011	0.201	5.197	3.87%
2012	0.155	4.527	3.42%
2013	0.165	5.221	3.16%
2014	0.230	4.954	4.64%
Rolling 10 year annual average (2003 – 2012)	0.189	8.246	2.34%
Rolling 10 year annual average (2004 – 2013)	0.182	7.637	2.38%
Rolling 10 year annual average (2005 – 2014)	0.176	7.018	2.51%

[36] SEEAWP Aggregates Monitoring Surveys
[37] Source: Mineral Extraction in Great Britain survey, Table 2 "Sand and Gravel for Construction". Please note that 2014 is the most recent published report.

Sales of Crushed Rock 2003 – 2023 (million tonnes)

(Sources: SEEAWP Aggregates Monitoring Surveys, and AMRI Surveys)

	Oxfordshire Crushed Rock Sales (million tonnes)[38]	**England Crushed Rock Sales (million tonnes)[39]**	**Oxfordshire's sales as a percentage of England's sales.**
2003	0.629	83.957	0.75%
2004	0.557	85.653	0.65%
2005	0.564	80.593	0.70%
2006	0.495	83.722	0.59%
2007	0.717	82.922	0.86%
2008	0.543	75.179	0.72%
2009	0.363	59.666	0.61%
2010	0.272	50.115	0.54%
2011	0.322	57.744	0.56%
2012	0.242	52.980	0.46%
2013	0.502	53.417	0.94%
2014	1.061	63.835	1.66%
2015	0.914	*2015 figures not available*	n/a
2016	0.715	*2016 figures not available*	n/a
2017	0.867	*2017 figures not available*	n/a
2018	0.751	*2018 figures not available*	n/a
2019	0.843	83.015	1.02%
2020	1.087	2020 figures not available	n/a

[38] SEEAWP Aggregates Monitoring Surveys
[39] Source: BGS 2014 and 2019 survey

	Oxfordshire Crushed Rock Sales (million tonnes)[38]	England Crushed Rock Sales (million tonnes)[39]	Oxfordshire's sales as a percentage of England's sales.
2021	1.254	2021 figures not available	n/a
2022	1.146	2021 figures not available	n/a
2023	**1.002**	**2021 figures not available**	n/a
Rolling 10 year annual average 2003 - 2012	**0.470**	**71.253**	**0.66%**
Rolling 10 year annual average 2004 - 2013	0.458	68.199	0.67%
Rolling 10 year annual average 2005 - 2014	0.508	66.017	0.77%
Rolling 10 year annual average 2006 - 2015	0.543	n/a	n/a
Rolling 10 year annual average 2007 - 2016	0.565	n/a	n/a
Rolling 10 year annual average 2008 – 2017	0.580	n/a	n/a
Rolling 10 year annual average 2009 – 2018	0.601	n/a	n/a
Rolling 10 year annual average 2010 – 2019	0.649	n/a	n/a
Rolling 10 year annual average 2011 – 2020	0.730	n/a	n/a
Rolling 10 year annual average 2012 – 2021	0.824	n/a	n/a

	Oxfordshire Crushed Rock Sales (million tonnes)[38]	England Crushed Rock Sales (million tonnes)[39]	Oxfordshire's sales as a percentage of England's sales.
Rolling 10 year annual average 2013 – 2022	0.914	n/a	n/a
Rolling 10 year annual average 2014 – 2023	0.964	n/a	n/a
Average of last 3 years 2014 – 2016	0.897	n/a	n/a
Average of last 3 years 2015 – 2017	0.832	n/a	n/a
Average of last 3 years 2016 – 2018	0.778	n/a	n/a
Average of last 3 years 2017 – 2019	0.820	n/a	n/a
Average of last 3 years 2018 – 2020	0.894	n/a	n/a
Average of last 3 years 2019 – 2021	1.061	n/a	n/a
Average of last 3 years 2020-2022	1.162	n/a	n/a
Average of last 3 years 2021-2023	**1.134**	**n/a**	**n/a**

Appendix 2

Imports and Exports

Imports, Exports and Consumption of Primary Aggregates in Oxfordshire

2009, 2014, 2020 (millions of tonnes) (Source: Collation of the Results of the 2019 Aggregates Minerals Survey for England and Wales, MHCLG, August 2021 and Collation of the Results of the 2014 Aggregates Minerals Survey for England and Wales, DCLG, October 2016, Collation of the Results of the 2019 Aggregates Minerals Survey for England and Wales, DCLG, October 2011)

	Sand and Gravel 2009	Crushed Rock 2009	All Primary Aggregates 2009	Sand and Gravel 2014	Crushed Rock 2014	All Primary Aggregates 2014	Sand and Gravel 2019	Crushed Rock 2019	All Primary Aggregates 2019
A. Production / Sales in Oxfordshire	0.628	0.363	0.991	0.869	1.061	1.93	1.248	0.843	2.091
B. Exported out of Oxfordshire	0.140	0.179	0.319	0.221	0.347	0.568	0.476	0.582	1.058[40]
C. Produced and consumed in Oxfordshire (A – B)	0.487	0.184	0.672	0.648	0.714	1.362	0.772	0.261	1.033
D. Imported into Oxfordshire	0.270	0.441	0.711	0.117	0.787	0.904	0.128	0.356	0.484

[40] This included the unallocated. It should be noted that some of this may have been consumed in Oxfordshire.

	Sand and Gravel 2009	Crushed Rock 2009	All Primary Aggregates 2009	Sand and Gravel 2014	Crushed Rock 2014	All Primary Aggregates 2014	Sand and Gravel 2019	Crushed Rock 2019	All Primary Aggregates 2019
E. Total Consumption in Oxfordshire (C+ D)	0.757	0.625	1.383	0.765	1.501	2.266	0.900	0.617	1.517

The equivalent figures for 2005 are not available because Oxfordshire was grouped with Buckinghamshire and Berkshire in the AM2005 Report.

No equivalent information can be derived from the earlier AM2001 Survey report, because all results are presented on a regional basis and there are no local figures.

Destinations

Destinations of Sand & Gravel Produced in Oxfordshire 2009 and 2014
(Source: Oxfordshire County Council Aggregates Monitoring Survey 2009 and 2014)

Destination	**2009 Sand and Gravel (including soft sand)** Tonnes	**2009 Sand and Gravel (including soft sand)** %	**2014 Sand and Gravel (including soft sand)** Tonnes	**2014 Sand and Gravel (including soft sand)** %
Oxfordshire	487,260	77.6	648,282	74.60
Berkshire	20,785	3.3	99,259	11.42
Buckinghamshire & Milton Keynes	13,663	2.2	9,712	1.11
Rest of South East & London	15,565	2.5	4,642	0.81
Wiltshire, Swindon & Gloucestershire	68,203	10.9	95,089	10.94
Northamptonshire & Warwickshire	4,993	0.8	9,674	1.11
TOTAL	627,783	100	866,658	100

Destinations of Crushed Rock Produced in Oxfordshire 2009 and 2014
(Source: Oxfordshire County Council Aggregates Monitoring Survey 2009 and 2014)

Destination	**2009 Crushed Rock Tonnes**	**2009 Crushed Rock %**	**2014 Crushed Rock Tonnes**	**2014 Crushed Rock %**
Oxfordshire	180,867	49.8	663,463	62.56
Berkshire & Buckinghamshire & Milton Keynes	23,081	6.4	254,223	23.97
Rest of South East & London	0	0	5,755	0.55

Destination	2009 Crushed Rock Tonnes	2009 Crushed Rock %	2014 Crushed Rock Tonnes	2014 Crushed Rock %
Wiltshire, Swindon & Gloucestershire	29,694	8.2	14,308	1.35
Northamptonshire & Warwickshire	118,788	32.7	121,258	11.43
TOTAL	362,839	100	1,060,573	99.86

The AM2005 survey report combined figures for the destinations of aggregates sold in Oxfordshire with the destinations of sales in Berkshire and Buckinghamshire. It is therefore not possible to derive equivalent figures for 2005.

Destinations of Sand & Gravel Produced in Oxfordshire 2019

(Source: BGS/MHCLG AM2019 Survey)

For 2019, we do not currently have the exact amounts of mineral produced in Oxfordshire that were consumed by other areas.

The AM2019 set out the % of the amount of sand and gravel consumed in each destination that was produced from Oxfordshire in relation to the Authorities own total demand of sand and gravel. The table then indicates the lowest and maximum amount of sand and gravel produced from Oxfordshire based on these percentages.

Destination of Oxfordshire's produced Land won Sand and Gravel (Including soft sand) in 2019 (1.248mt)

Destination	Proportion	Range* of tonnages produced in Oxfordshire (millions of tonnes)
Oxfordshire	62% of total sand and gravel consumed in Oxfordshire	0.772mt**
Hampshire and Isle of Wight	Between 10% and 20% of total sand and gravel consumed in Hampshire and Isle of Wight	Between 0.095mt and 0.189mt came from Oxfordshire
Buckinghamshire and Milton Keynes	Between 1% and 10% of total sand and gravel consumed in Berkshire	Between 0.014mt and 0.138mt came from Oxfordshire

Destination	Proportion	Range* of tonnages produced in Oxfordshire (millions of tonnes)
Berkshire	Between 1% and 10% of total sand and gravel consumed in Berkshire	Between 0.007mt and 0.074mt came from Oxfordshire
Wiltshire and Swindon	Between 1% and 10% of total sand and gravel consumed in Wiltshire and Swindon	Between 0.005mt and 0.052mt came from Oxfordshire
West of England (Avon)	Between 10% and 20% of total sand and gravel consumed in West of England	Between 0.002mt and 0.006mt came from Oxfordshire
Surrey, Dorset, Gloucestershire, Northamptonshire, Somerset and Exmoor National Park, Warwickshire, Worcestershire, Scotland and West London	Less than 1% of each MPAs total sand and gravel was sourced from Oxfordshire	Max .043mt came from Oxfordshire
Unknown in the South East	Between 40 and 50% sand and gravel consumed in the South East	Between 0.172mt and 0.216mt came from Oxfordshire
Unknown Destination	Between 1%-10% of the total sand and gravel consumed that went to unknown destinations.	Between 0.014mt and 0.142mt came from Oxfordshire

*****This is the highest and lowest percentage of sand and gravel from Oxfordshire taken from the importing Authorities total Sand and Gravel consumed. (Other than Oxfordshire)

** Known figure from AM2019

Destinations of Crushed Produced in Oxfordshire 2019

(Source: BGS/MHCLG AM2019 Survey)

The AM2019 set out the % of the amount of Crushed Rock consumed in each destination that was produced from Oxfordshire, in relation to the Authorities own total demand of sand and gravel. The table then indicates the lowest and maximum amount of sand and gravel produced from Oxfordshire based on these percentages.

Total Crushed Rock exported destinations in 2019 (0.582mt)

Source	Proportion	Range* (millions of tonnes)
Oxfordshire	31% of total Consumed Crushed Rock in Oxfordshire	0.261mt*
Northamptonshire	Between 1% and 10% of total Crushed Rock consumed in Northamptonshire	Between 0.017mt and 0.165mt came from Oxfordshire
Buckinghamshire and Milton Keynes	Between 10%and 20% of total Crushed Rock consumed in Buckinghamshire and Milton Keynes	Between 0.070 and 0.141mt came from Oxfordshire
Warwickshire	Between 1% and 10% of total Crushed Rock consumed in Warwickshire	Between 0.011mt and 0.107mt came from Oxfordshire
Berkshire	Between 1% and 10% of total Crushed Rock consumed in Berkshire	Between 0.009mt and 0.089mt came from Oxfordshire
Unknown somewhere in the South East	Between 50% and 60% of total Crushed Rock destination in the South East unknown	0.256mt and 0.307mt came from Oxfordshire
Bedfordshire, Gloucestershire, Hampshire and Isle of Wight, Hertfordshire, Surrey	Less than 1% of each MPAs total Crushed Rock was sourced from Oxfordshire	Max 0.043mt came from Oxfordshire

*****This is the highest and lowest percentage of sand and gravel from Oxfordshire taken from the importing Authorities total Crushed Rock consumed. (Other than Oxfordshire)

** Known figure from AM2019

Destinations of Sand and Gravel Produced in Oxfordshire 2005, 2009 and 2014 (Source: AM2005, and AM2009, 2014)

Destination (Source MPA – Oxfordshire)	Sand and gravel (millions of tonnes) 2005	Sand and gravel (millions of tonnes) 2009	Sand and gravel (millions of tonnes) 2014
Berkshire, Oxfordshire and Buckinghamshire	0.304	0.520 of which 0.487 in Oxfordshire	0.757 of which 0.648 in Oxfordshire
Elsewhere in South East	0.418	0.015	0.012
Elsewhere	0.550	0.090	0.100
Unallocated	0.017	0	0
Total	1.289*	0.627*	0.869*

*Totals may not match sub totals due to varying categories

Destinations of Crushed Rock Produced in Oxfordshire 2005 and 2009

Destination (Source MPA – Oxfordshire)	Crushed Rock (millions of tonnes) 2005	Crushed Rock (millions of tonnes) 2009	Crushed Rock (millions of tonnes) 2014
Berkshire, Oxfordshire and Buckinghamshire	0.277	0.184 all in Oxfordshire	0.919
Elsewhere in South East	0.134	0.025 incl. Berkshire & Buckinghamshire	0.010
Elsewhere	0.152	0.154	0.130
Total	0.564*	0.363	1.061

*May not match sub totals due to varying categories.

This data comparison is not currently available for AM2019.

Sources

Sources of Sand and Gravel consumed in Oxfordshire 2009
(Source: BGS)

Source	Proportion	Tonnage where known (millions of tonnes)
Oxfordshire	64%	0.474
Gloucestershire	25%-20%	0.145- 0.185
Warwickshire, Bristol (marine), Hampshire, Berkshire and Leicestershire (in descending order)	Between 5% and 1% from each area	n/a
Milton Keynes, Central Bedfordshire (includes Bedford Borough), Kent, Cambridgeshire, Staffordshire, Buckinghamshire, Dorset, Wiltshire, Solihull (includes Walsall) and Hertfordshire (in descending order)	Less than 1% from each area	n/a

Sources of Crushed Rock consumed in Oxfordshire 2009
(Source: BGS)

Source	Proportion	Tonnage where known (millions of tonnes)
Oxfordshire	29%	0.181
South Gloucestershire	30%-25%	0.187- 0.156
Somerset	25% - 20%	0.156- 0.125
Leicestershire	15%-10%	0.093- 0.063
Rhondda, Cynon, Taf (Taff), Gloucestershire and Powys (in descending order)	Between 5% and 1% from each area	n/a
Shropshire, North Somerset and Caerphilly/Merthyr Tydfil (merged for confidentiality) and Derbyshire (in descending order)	Less than 1% from each area	n/a

Sources of Sand and Gravel consumed in Oxfordshire 2014
(Source: BGS)

Source	Proportion	Tonnage where known (millions of tonnes)
Oxfordshire	80-90%	0.612 - 0.6885
Wiltshire, Windsor & Maidenhead, Cambridgeshire, Leicestershire	1-10%	0.00765 – 0.0765
Devon, Gloucestershire, Hampshire, West Berkshire, Central Bedfordshire, Essex, Hertfordshire, Northamptonshire, Staffordshire, Worcestershire.	<1%	<0.00765

Sources of Crushed Rock consumed in Oxfordshire 2014
(Source: BGS)

Source	Proportion	Tonnage where known (millions of tonnes)
Oxfordshire	40-50%	0.6 – 0.75
Somerset	30-40%	0.45 – 0.6
Leicestershire	10-20%	0.15 – 0.3
Gloucestershire	1-10%	0.015 – 0.15
North Somerset, South Gloucestershire, Cambridgeshire, Shropshire, Powys	<1%	<0.015

Sources of Sand and Gravel consumed in Oxfordshire 2019
(Source: BGS)

Total Land won Sand and Gravel (Including soft sand) consumed in Oxfordshire in 2019 (0.900mt)

Source	Proportion	Tonnage where known (millions of tonnes)
Oxfordshire	80-90%	0.772mt*
Cambridgeshire, Lincolnshire, Staffordshire and Wiltshire	Between 1% and 10% from each area	Between 0.036mt and 0.363mt**

Source	Proportion	Tonnage where known (millions of tonnes)
	of total consumed within Oxfordshire	
Leicestershire, Buckinghamshire Bristol City, Central Bedfordshire, Gloucestershire, Hampshire, Hertfordshire and Portsmouth	Less than 1% from each area	Max .081mt***

* Exact figure taken from AM Survey 2019

** The lower number represents 1% of total consumed and the higher represents 10% of total consumed.

*** A maximum of 1% was taken for each Authority that exported Minerals to Oxfordshire

Sources of Crushed Rock Gravel consumed in Oxfordshire 2019

(Source: BGS)

Total Crushed Rock consumed in Oxfordshire in 2019 (0.617mt)

Source	Proportion	Tonnage Estimates (millions of tonnes)
Oxfordshire	40-50%	0.261mt*
Gloucestershire, Leicestershire, Somerset	10-20%	Between 0.185 and 0.370**
North Somerset, Powys, Rhondda Cynon Taf (Taff), Shropshire, South Gloucestershire	Between 1% and 10% from each area of total consumed within Oxfordshire	Between 0.031mt and 0.308mt***
Cambridgeshire, Derbyshire, Warwickshire	Less than 1% from each area	Max .024mt****

* Exact figure taken from AM Survey 2019

** The lower number represents 10% of total consumed and the higher represents 20% of total consumed.

*** The lower number represents 10% of total consumed and the higher represents 20% of total consumed.

**** A maximum of 1% was taken for each Authority that exported Minerals to Oxfordshire

Appendix 3

Oxfordshire Minerals and Waste Local Plan Part 1: Core Strategy Mineral provision requirements over the Plan period.

This section sets out the requirements to meet the Core Strategy Provision requirements as set out in Policy M2

Sand and Gravel Provision required over plan period 2014 – 2031

(As at Dec 2023)

	Sharp Sand & Gravel (million tonnes)
A. Annual Provision (from policy M2 / LAA)	1.015
B. Requirement 2014 – 2031 (policy M2) (A x 18 years)	18.270
C. Sales in 2014 – 2023	8.387
D. Remaining requirement (B – C)	9.883
E. Permitted Reserves at end 2023	7.693
F. Estimated permitted reserves available to be worked during remainder of plan period (from beginning 2024 to end 2031)	7.234
G. Remaining requirement to be provided for in Plan (D – F)	**2.649**

Notes:

1. Permitted Reserves at end 2023 (Row E) do not include approximately 1.0 million tonnes of Sharp Sand and Gravel at Thrupp Farm Quarry, Radley (South), which were previously included. Under 'ROMP' procedure the planning permission for this

site has gone into suspension, and is currently dormant, and the site cannot be worked until there has been a review of the planning conditions attached to the planning permission. An application (MW.0041/23) has been submitted. Consequently, in accordance with national Planning Practice Guidance, the 'reserves' at this site should not currently be included as permitted reserves and they do not form part of the landbank.

2. Stonehenge Farm has not extracted any sand and gravel during 2023 and permission for this site has now expired.. This reserve has now been removed from the landbank and this has impacted on total mineral available to be worked over the Plan period.

3. A number of sites have limited production capacity and at these current rates, will not be able to extract all the mineral required by the end of the planning permission.

Soft Sand provision required over the Plan period 2014-2031

(As at Dec 2023)

	Soft Sand Core Strategy Requirement (Million Tonnes)
A Annual Provision	0.189 (Policy M2)
B. Requirement 2014 – 2031	3.402
C. Sales in 2014 – 2023	2.353
D. Remaining requirement (B – C)	1.049
E. Permitted Reserves at end 2023	3.288
F. Estimated permitted reserves available to be worked during remainder of plan period (from beginning 2024 to end 2031)	1.1
G. Remaining requirement to be provided for in Plan	**0**

Notes:

1. The planning application for an extension to Bowling Green Farm Quarry submitted in 2016 and permitted in June 2017 is for the working of a total of 1.6 million tonnes of soft sand. Information in the application indicates this will be worked over 19 years from 2018 to 2036 at an average rate of working of approximately 0.08 million tonnes per annum. Mineral working at Bowling Green Farm Quarry is therefore expected to extend beyond the end of the plan period (2031).
2. The planning application for an extension to Duns Tew Quarry submitted in 2014 and permitted in May 2017 is for the working of a total of 0.415 million tonnes of soft sand. Information in the application indicates this will be worked over 16/17 years from 2017 to 2033/34 at an average rate of working of approximately 0.025 million tonnes per annum. Mineral working at Duns Tew Quarry is therefore expected to extend beyond the end of the plan period (2031).
3. The planning application at Shellingford for 1.8mt of Soft Sand was permitted at the end of 2020 along with 1mt of Crushed Rock and the site is expected to extend beyond the end of the Plan Period (2031).

Crushed Rock provision required over the Plan period 2014-2031

(As at December 2023)

	Core Strategy Requirement
A. Annual Provision (from policy M2 / LAA)	0.584
B. Requirement 2014 – 2031 (policy M2) (A x 18 years)	10.512
C. Sales in 2014 – 2023	9.640
D. Remaining requirement (B – C)	0.872
E. Permitted Reserves at end 2023	4.744
F. Estimated permitted reserves available to be worked during remainder of plan period (from beginning 2024 to end 2031)	4.189
G. Remaining requirement to be provided for in Plan	**0**

Appendix 4

Population

The table below presents the population figures for Oxfordshire for the 10-year period (2013 to 2023)

Table 1: Oxfordshire population figures for the 10-year period (2013 to 2023 [41])

Year	Population
2013	669,390
2014	676,621
2015	682,571
2016	690,541
2017	696,188
2018	702, 259
2019	708,513
2020	714,766
2021	726,727
2022	737,795
2023	750,230

Population forecasts for Oxfordshire up to 2031

Year	Population Forecast[42] (ONS)	Population Forecast [43] (OCC)
2024	709,180	753074
2025	712023	759,881
2026	714,785	767,016
2027	717,536	774,220

[41] www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/
[42] www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections
[43] insight.oxfordshire.gov.uk/cms/future-population

Year	Population Forecast[42] (ONS)	Population Forecast [43] (OCC)
2028	720,204	780,720
2029	722,729	788,451
2030	725,092	797,018
2031	727,403	806,876

Housing Completion Figures (taken District Authority Monitoring Reports (AMRs)

New Build Housing completions by year in Oxfordshire[44]

Year	Oxfordshire Total Completions from AMRs
2011/12	1,797
2012/13	1,576
2013/14	1,881
2014/15	3,012
2015/16	3,858
2016/17	4,370
2017/18	4,818
2018/19	5,287
2019/20	6,114
2020/21	4,746
2021/22	4,956
2022/23	5,492

[44] District Authority Monitoring Reports (Combined by the M&W Policy Team)

Planned housebuilding[45]

Year	Planned housebuilding
2023/24	3,516
2024/25	3,362
2025/26	3,736
2026/27	4,148
2027/28	4,007
2028/29	4,557
2029/30	4,935
2030/31	5,500

[45] District local plans, District Planning Officers, Oxfordshire County Council Data Team