Herefordshire Council

HEREFORDSHIRE LOCAL AGGREGATES ASSESSMENT 2024

(COMBINED THREE YEAR MONITORING PERIOD: JAN 2021 TO DEC 2023)

Contents

1. Executive Summary

Table 1: Herefordshire headline primary minerals indicators - 2021-2023 monitoring periods.

	Year		Change from previous year	Change from previous year
Production	2021	Sales	▲	▼
	2021	3 Year sales average	▲	**No Change**
	2021	10-year sales average	▲	Unavailable[1]
Production	2022	Sales	▼	▲
	2022	3 Year sales average	▼	▲
	2022	10-year sales average	▲	Unavailable
Production	2023	Sales	▼	▼
	2023	3 Year sales average	▲	▼
	2023	10-year sales average	▲	Unavailable
Landbank	2021	Reserves	▼	▼
	2021	Landbank (using 10-year sales average)	▼	Unavailable
	2021	Landbank (using 3-year sales average)	▼	▼
	2021	Landbank (using annual sales figure)	▲	▲
Landbank	2022	Reserves	▼	▼
	2022	Landbank (using 10-year sales average)	▲	Unavailable
	2022	Landbank (using 3-year sales average)	▲	▼
	2022	Landbank (using annual sales figure)	▲	▲
Landbank	2023	Reserves	▼	▼
	2023	Landbank (using 10-year sales average)	▼	Unavailable
	2023	Landbank (using 3-year sales average)	▼	▼
	2023	Landbank (using annual sales figure)	▲	▲
	2023	**Minimum Landbank Requirement**	**7 Years**	**10 Years**

For sand and gravel, and crushed rock there are two operational quarries for each aggregate type, therefore the picture of Herefordshire sand and gravel sales and permitted reserves cannot be published

[1] Unavailable; the data for 10 years average sales and landbank are unavailable due to data being available only for the last 6 years, please see section 3.2 for further details.

due to commercial sensitivities. This Local Aggregates Assessment (LAA) provides proportionate estimates of sales, reserves and landbanks of sand and gravel, and crushed rock.

1.1 Sand & Gravel

- 2022 and 2023 sales were down compared to sales in 2021.
- In 2021, 2022, and 2023 the ten-year averages sales increased from previous years.
- In 2023 the three-year average sales increased from 2022, which in turn increased from 2021.
- The 2023 Landbank is above the minimum landbank requirement of 7 years when using the ten-year average sales figure. However, when using the three-year average sales figure, the landbank is below the minimum requirement.
- Assessment of future demand indicates there will be a need for additional reserves of sand and gravel to become operational before the end of the Minerals and Waste Local Plan (MWLP) period (2041). Whichever method of demand forecasting is used, the two currently active quarries must cease operations by 2030 and 2032, therefore provision is made in the emerging MWLP to address this and increase resilience, through the allocation of sites and areas of search.

1.2 Crushed Rock

- In 2021 and 2023 sales and reserves have decreased from previous years, however, there was a slight increase in 2022 in sales.
- In 2023 the Landbank using annual sales figures have increased.
- The 2023 Landbank is above the minimum landbank 10 years using the three-year and six-year average sales figures, due to the ten-year average sales figure not being available. With 2023 being the only year for which a 6-year average sales figure is available.
- Assessment of future demand indicates there is currently an adequate reserve of crushed rock within Herefordshire, however, towards then end of the MWLP period, additional reserves will be required to become operational. Therefore, provision is made in the emerging MWLP to address this and increase resilience, through the allocation of sites and areas of search.

1.3 Recycled Aggregates

- Recycled aggregates could have an increasingly significant role to play in reducing the reliance on imports of aggregates in Herefordshire in the future.

- Herefordshire produces recycled aggregate from the waste recovery facility at the Lugg Bridge facility near Hereford.

- During 2021 to 2023, Lugg Bridge sales amounted to below 50% of its permitted production capacity.

- Demand for recycled aggregate from waste is set to increase up to 2041.
  The Lugg Bridge facility is allocated in the emerging MWLP for an extension to its operational capacity. Strategic employment sites, industrial estates and active mineral workings are also identified for additional waste recovery capacity to meet forecast demand.

2. Introduction

Minerals resources in Herefordshire are limited in range, primarily consisting of aggregates for use in construction and a small amount of building stone. Aggregates comprise sand and gravel, crushed rock and secondary or recycled materials gained from quarry waste operations.

Herefordshire is not a significant producer of minerals, with only a small number of operational quarries. With few operators in the sector, much of the data on sales is restricted for reasons of commercial confidentiality.

National policy guidance requires Herefordshire to maintain an adequate and steady supply of aggregates during the current plan period to 2041. The West Midlands Aggregate Working Party (WMAWP) has agreed to use a ten-year rolling average as the principal indicator for aggregates production, together with an assessment of local information which may indicate that a different indicator of demand should be employed. This is consistent with national policy guidance.

The purpose of the LAA is to establish whether there is a shortage or surplus of supply and provides evidence for determining the level of provision of minerals aggregates to be made in Herefordshire's MWLP.

The first section of the report considers the 2021, 2022, 2023 monitoring periods' data on the supply (sales) of aggregates in Herefordshire. It then goes on to consider local information on development trends, to provide a forecast for demand and the future need for additional aggregate mineral resources. A summary of the 2021, 2022, and 2023 data is illustrated in the headline performance indicators for primary aggregates, in Table 1 above.

3. Assessment of Aggregate Supply

3.1 Sand & Gravel

Throughout Herefordshire, there are superficial sedimentary deposits of glacial tills, sand and gravels. River deposits, found in the river valleys of the Wye, Lugg and Arrow, and glacial deposits, present in the north and west of Herefordshire, are the principal areas where sand and gravel are found.

There are three permitted sand and gravel quarries in Herefordshire:

- Wellington Quarry
- Upper Lyde Quarry
- Shobdon Quarry (inactive)

Only Wellington and Upper Lyde quarries were operational during 2021 to 2023, and therefore it is not possible to publish data on sales and reserves of sand and gravel during the monitoring period in this report. However, it is possible to report on general trends, so that an understanding of supply issues can be understood.

Shobdon Quarry has been worked in the past, however, has been inactive for several years. It is understood that the long-term operator of the site has not renewed their lease (which expired at the end of December 2020), and it is likely that the landowner will seek to identify a new operator, since Shobdon Quarry has an estimated 0.911mt of permitted reserves remaining, plus an allocation in the adopted MWLP.

Table 2: Sand & Gravel sales in Herefordshire 2014-2023

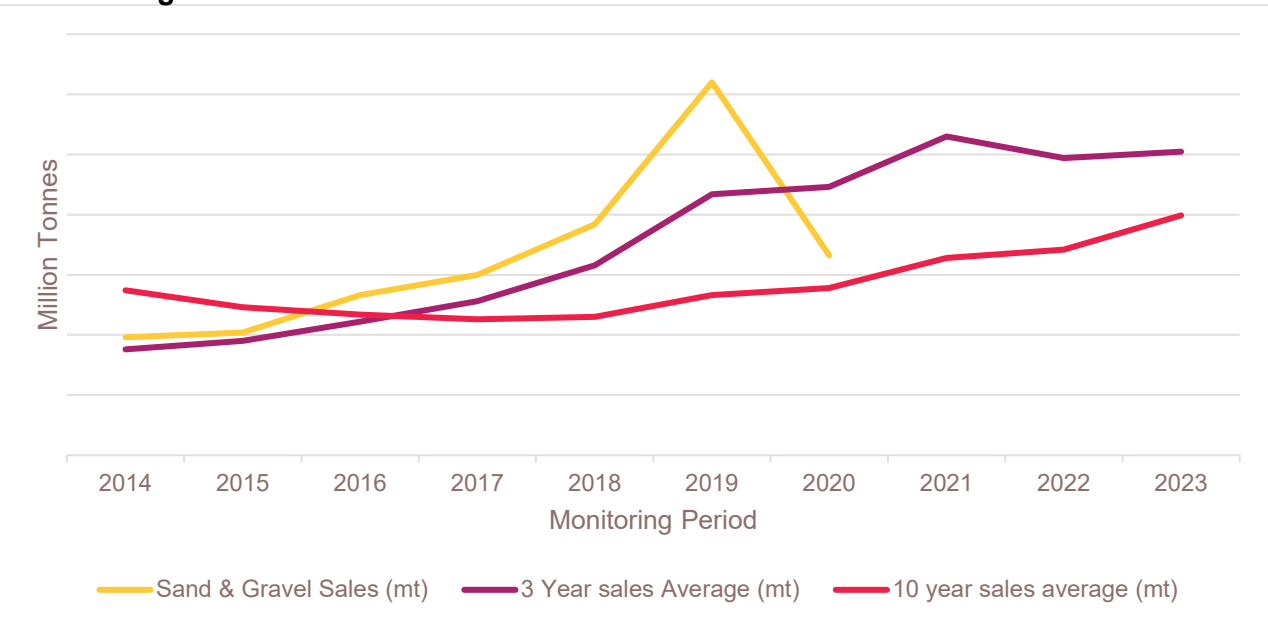
Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-year Average Sales (Mt)
Sand & gravel sales (Mt)	0.098	0.102	0.133	0.15	0.192	0.31	0.166	▲	▼	▼	**0.167**

2021, 2022, and 2023 data cannot be displayed for commercial sensitivity.

Sales: the latest available data indicates that in 2021 sales of sand & gravel were higher than the previous year and the highest record over the past ten years. During 2022 and 2023 sand and gravel sales have fallen each year.

From 2021 to 2023 three-year and ten-year average sales figures have increased from 2020.

Figure 1: Trends of Herefordshire's sand & gravel sales, 10-year sales average and 3-year sales average 2013 - 2023.



Sales data cannot be displayed from 2021 onwards due to the commercial sensitivity of the data.

Figure 1 above shows the gradual upward trend of annual sand & gravel sales in Herefordshire over the past ten years. Note that from 2012, apportionment has been based on 10-year average sales.

Sales by destination data will be displayed in section 4 of this report.

Table 3: Sand & Gravel Permitted Reserves in Herefordshire 2014-2023

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Sand & gravel permitted reserves (Mt)	▼	▼	▲	▼	▼	▼	▲	▼	▲	▼

Table 3 above shows the general trend of sand & gravel permitted reserves are falling over the years, with 2021 and 2023 showing a decline in permitted reserves, however, 2022 showed an increase in the permitted reserves. Reserves are expected to fall in line with annual sales, the emerging MWLP contains allocations and areas of search. This allows for increases in the reserves to come forward over the plan period.

In 2023 Upper Lyde received permission for an extension, resulting in an increase to their reserves.

3.2 Crushed Rock

Significant outcrops of Silurian limestone can be found on the western side of the Malvern Hills and Ledbury, in the Woolhope Dome area to the east of Hereford and in the north-west of the county around Aymestrey, Leintwardine and towards the Welsh border near Presteigne.

There are only two producers of crushed rock in Herefordshire at Leinthall Quarry and Perton Quarry. Therefore, data cannot be published for reasons of commercial sensitivity.

Table 4: Crushed Rock sales in Herefordshire 2018-2023

Year	2018	2019	2020	2021	2022	2023	6-year Sales Average ()
Crushed Rock sales (Mt)	▲	▼	▲	▼	▲	▼	0.409

The years 2020 and 2022 experienced an increase in crushed rock sales, while 2021 and 2023 experienced a decrease in sales.

10-year average sales for Herefordshire alone are unavailable due to records having been amalgamated with other minerals planning authorities in previous years. However, a six-year average sales figure can be provided based on the available data, 0.409 million tonnes. As can be seen in table 4 above there is annual fluctuations in the sales.

Table 5: Crushed Rock Permitted Reserves in Herefordshire 2018-2023

Year	2018	2019	2020	2021	2022	2023
Crushed Rock Permitted reserves (Mt)	▼	▼	▲	▼	▼	▼

As can be seen in table 5 above, crushed rock permitted reserves have consistently declined from 2018. Reserves are expected to fall in line with annual sales, the emerging MWLP contains allocations and areas of search. This allows for increases in the reserves to come forward over the plan period.

For information: in the *Annual Reports of the West Midlands Aggregate Working Party,* key findings from the monitoring of sales and reserves of crushed rock in Herefordshire have previously been combined with comparable data for Warwickshire, Worcestershire and Staffordshire, so that aggregated figures can be reported. However, the most recent Annual Report (2022) combines data with Warwickshire and Staffordshire only, as Worcestershire had no operational crushed rock quarries during that monitoring period.

3.3 Secondary and Recycled Aggregates

Recycled aggregates are the product of processing inert construction and demolition waste, asphalt planings and used railway ballast into construction aggregates.

Secondary materials are derived from other industrial processes. This can include mineral extraction operations, such as sand and crushed rock material from ball clay and china clay production, or waste from slate production. Other sources of secondary materials include blast furnace and steel slags, incinerator bottom ash (IBA), furnace bottom ash (FBA), coal-derived fly ash (CDFA) and crushed glass sand.

The Mineral Products Association's *Profile of the UK Minerals Products Industry 2023 edition* states that recycled and secondary materials accounted for just over 30% of total aggregate supply in Great Britain in 2022.

There are currently no industrial processes in Herefordshire which are known to produce secondary aggregates. There may be potential for some provision of secondary aggregates from existing quarrying operations; however there does not appear to be any current proposals for this activity. It is understood, from site visits, that some hard rock dust from quarries in Wales is used in concrete block manufacture within Herefordshire.

Sales: recycled aggregates are currently being produced within Herefordshire, principally at the CD&E waste recovery facility at the Lugg Bridge site. The facility is located on a worked out and restored sand and gravel quarry. It has permitted capacity to produce 250,000 tonnes of recycled aggregate.

Table 6: Lugg Bridge recycled aggregate sales 2021, 2022, and 2023

Recycled Product Sales	2021 (tonnes)	2022 (tonnes)	2023 (tonnes)
For aggregate uses			
• regular size/specification	30,433	30,054	31,593
• mixed size/specification	No Data	1,891	1,871
• for construction fill	30,368	26,906	25,578
• **Total**	**60,801**	**58,851**	**59,042**
For non-aggregate uses			
○ landfill engineering/restoration	55,904	51,800	43,348
○ **Total**	**55,904**	**51,800**	**43,348**

Production rates did not reach permitted capacity (250,000 tonnes) during either 2021, 2022 or 2023. Table 6 shows that the amount of recycled aggregate sold in 2022 fell slightly compared to that sold in 2021, then increased in 2023. No data was provided in 2021 for mixed size/specification.

4. Sales by Destination

4.1 Sand & Gravel

Table 7: Sales by destination - Sand & Gravel

Region	Area	Percentage of Sales of Sand & Gravel		
		2021	2022	2023
Southeast	Oxfordshire	**0.00**	**0.00**	**0.03**
Southwest	Gloucestershire	**2.86**	**0.44**	**11.98**
	West of England (Avon)	**1.43**	**1.97**	**4.61**
	Wiltshire and Swindon	**0.04**	**0.00**	**0.02**
Wales	Unknown but somewhere in South Wales	**0.00**	**0.00**	**0.03**
	Remainder of South Wales	**0.00**	**0.32**	**3.19**
	Southeast Wales	**0.00**	**0.64**	**0.57**
West Midlands	Herefordshire	**48.45**	**58.99**	**56.89**
	Remainder of West Midlands	**0.26**	**0.66**	**0.40**
	Shropshire and Telford & Wrekin	**0.55**	**0.61**	**0.09**
	Staffordshire	**0.00**	**0.00**	**0.01**
	Unknown but somewhere in the West Midlands	**21.55**	**26.60**	**6.40**
	Warwickshire	**0.02**	**0.00**	**0.07**
	Worcestershire	**24.84**	**9.77**	**15.70**

Table 7 above shows that, consistently, sand and gravel produced in Herefordshire was sold primarily within the county throughout 2021, 2022, and 2023. For sand and gravel sold out of county, adjacent neighbouring areas receive greater amounts compared to areas farther afield.

4.2 Crushed Rock

Table 8: Sales by destination - Crushed Rock

Region	Area	Percentage of Sales of Crushed Rock		
		2021	2022	2023
Southwest	Gloucestershire	**7.00**	**11.27**	**12.85**
	Wales	**0.00**	**0.00**	**78.40**
West Midlands	Herefordshire	**4.77**	**7.72**	**3.64**
	Unknown but somewhere in the West Midlands	**83.31**	**77.18**	**0.08**
	Worcestershire	**4.92**	**3.83**	**5.02**

Table 8 above shows that in the years 2021 and 2022 most crushed rock sales occurred in the West Midlands, however, in 2023 most sales occurred in Wales.

4.3 Secondary and recycled destinations

All the secondary aggregates produced at the Lugg Bridge site in 2021 and 2022 were sold to locations in the West Midlands and were transported by road.

However, in 2023 sales by destination became more diverse with sales in Gloucestershire, and Wales. However, he largest tonnages of sales still occurred within the West Midlands.

5. Assessment of Forecasted Aggregate Demand

5.1 Sand & Gravel

Consumption: the Government's Aggregate Minerals (AM) Surveys provide data on imports and consumption of sand and gravel for the West Midlands region and its sub-regions, including Herefordshire. Table 9 reproduces this information.

Table 9: Herefordshire sales, principal destinations, imports and consumption of sand and gravel 2005, 2009, 2014, 2019

Year	2005	2009	2014	2019
Sales Destination				
Herefordshire	156,000t	111,000t	69,000t	100,000t
Elsewhere in West Midlands	49,000t	5,000t	24,000t	50,000t
Elsewhere	11,000t	6,000t	4,000t	5,000t
Unknown	19,000t	0t	0t	0t
Imports				
Land-won sand and gravel	121,000t	63,000t	83,000t	153,000t
Marine sand and gravel	12,000t	4,000t	1,000t	1,000t
Consumption				
Land-won sand and gravel	603,000t	174,000t	153,000t	254,000t
Marine sand and gravel	12,000t	4,000t	1,000t	1,000t

For the figures in 2019, over half (60%) of countywide consumption is met by imports of sand and gravel from outside the county and less than half (40%) is met by quarries located within Herefordshire. Imports are primarily from Staffordshire (20% to 30%) and Worcestershire (30% to 40%).

Sand & Gravel Landbank: the NPPF seeks a minimum landbank of seven years for sand and gravel provision. Due to the commercial sensitivity of the data no exact figure can be presented here. The seven-year minimum landbank based on the ten-year sales average is achieved within Herefordshire. However, using the three-year sales average the seven-year minimum landbank is narrowly below the minimum requirement.

Sand & Gravel forecast demand: the Minerals Needs Assessment 2021 (Minerals Need Assessment 2021 (herefordshire.gov.uk)) provides an in-depth assessment of demand for sand and gravel up to 2041, which is the end of the Minerals and Waste Local Plan (MWLP) period. It considers all the following methods, which are most frequently used to estimate future demand:

- Gross Value Added (GVA) forecasts.

- population projections.
- household or housing projections; and/or
- Core Strategy infrastructure requirements.

The various estimated forecasts for future sand & gravel demand are summarised in Table 10. The figures are calculated, based on the assumption that Herefordshire will continue to be reliant on imports of sand and gravel to meet 60% of its needs; a figure taken from the AMS 2019 (as more recent data becomes available, it will be incorporated into revised demand forecasting).

Table 10: Summary of sand and gravel forecast demand at 2041, assuming current level of import

Current level of import Scenario	Demand (tonnes)	Permitted reserve (tonnes)	Landbank	Tonnage required to maintain 7-year landbank
GVA growth (highest forecast)	284,000	0	0 years	4,030,000
Population growth, demand at 4.6 tonnes of aggregate per head	98,000	708,000	7.3 years	0
ONS household projections	154,000	0	0 years	2,353,000

Impact of forecasted demand on sand and gravel landbank: Depending on the forecast method used, there may be sufficient permitted reserves of sand and gravel remaining for the lifetime of the MWLP (up to 2041), or there may be an insufficient landbank remaining at the end of the Plan period.

If Herefordshire was to be self-sufficient in sand and gravel, Table 11 shows that no forecast predicts a sufficient landbank for sand and gravel in 2041 if no new reserves are permitted. Table 11 indicates a wide range of between 3.9 and 12.8 million tonnes of new reserve required to enable self-sufficiency at 2041.

Table 11: Summary of Sand & Gravel forecast demand at 2041, assuming self-sufficiency in sand & gravel production

Self-sufficient Scenario	Demand (tonnes)	Permitted reserve (tonnes)	Landbank	Tonnage required to maintain 7-year landbank
GVA growth (highest forecast)	714,000	0	0 years	12,816,000
Population growth, demand at 4.6 tonnes of aggregate per head	246,000	0	0 years	3,935,000
ONS household projections	384,000	0	0 years	9,901,000

Local context: Wellington and Upper Lyde are the only two operational sand and gravel quarries in Herefordshire. Current planning conditions require that Wellington quarry should cease working by 2032 and Upper Lyde by 2029. Therefore, regardless of which demand forecast most closely represents the real outcome for sand and gravel over the lifetime of the MWLP, there will be a need for additional reserves of sand and gravel to become operational to meet demand from 2029 onwards.

Local Minerals Planning Policies: the emerging MWLP is seeking to enable Herefordshire to increase its level of self-sufficiency (not least to reduce the environmental burdens from transport) and to make a reasonable contribution to the Managed Aggregate Supply System. Allocations of resources are being proposed at three quarries, providing a minimum of nearly 3 million tonnes of sand and gravel. In addition, preferred areas of search for new workings are also identified, to add robustness to supply. Where the preferred locations can be demonstrated not to meet need, proposals for sand and gravel extraction outside these areas may be permitted.

5.2 Crushed Rock

Current information does not enable the same level of analysis to be undertaken for crushed rock, as for sand and gravel. There is generally a lack of data in relation to crushed rock within Herefordshire, for reasons of commercial confidentiality.

Consumption: in the absence of publishable data, it is difficult to make meaningful assessments of demand. However, the four/five-yearly Aggregate Minerals Surveys (produced by Government) provide data for imports and consumption of crushed rock for Herefordshire. See Table 7.

Table 12. Imports and consumption of crushed rock in Herefordshire

Monitoring period	2005	2009	2014	2019
Import of crushed rock	1.522mt	0.421mt	0.533mt	0.289mt
Consumption of crushed rock	1.691mt	0.435mt	0.7mt	0.488mt

Consumption data shows that in the 2019 monitoring period, the consumption of crushed rock in Herefordshire was only a little higher than levels recorded ten years ago.

During the 2019 monitoring period, imports of crushed rock declined by around 45% from its 2014 levels and consumption by around 30%. This difference may indicate that Herefordshire's reliance on crushed rock from elsewhere has decreased, against a backdrop of fluctuating levels of consumption over the previous 10 years.

Nevertheless, the data available indicates that, as of 2019, Herefordshire remained a significant net importer of crushed rock (at around 60% or more of the total consumed). It was overwhelmingly imported from Powys (45% to 50%). The need for mineral operators to obtain the correct specification for market products can dictate some of this movement, where such materials are not available from local deposits.

The primary export destination for crushed rock quarried in Herefordshire is the adjoining local authority of Worcestershire, which is known to have little crushed rock reserve.

Landbank: the NPPF seeks a minimum landbank of ten years for crushed rock provision. However, data on permitted reserves and sales cannot be published for reasons of maintaining commercial confidentiality. Therefore, it is not possible to provide evidence on the landbank of crushed rock in Herefordshire. Herefordshire has above the minimum landbank using the annual and six-year average sales figures.

The West Midlands AMR provides some aggregated data from several minerals planning authorities on landbanks and permitted reserves, however, this is not considered to be particularly useful when attempting to make a reasonably accurate assessment of the local Herefordshire context.

During 2021 to2023, no planning applications for the quarrying of additional crushed rock resources were submitted within Herefordshire.

Forecast demand: the Mineral Needs Assessment 2021 (Minerals Need Assessment 2021 (herefordshire.gov.uk)), which is part of the evidence base for the emerging MWLP, considered two methods for forecasting potential future demand. These have produced widely varying forecasts for 2019-2041. Calculations have been made for two different scenarios, based on: whether Herefordshire continues to rely on imports of crushed rock to meet 58% of its needs; and on Herefordshire being self-sufficient in crushed rock production.

Table 13: Summary of crushed rock forecast demand at 2041, assuming current level of import and self-sufficiency

Scenario	**Demand 2019 - 2041**	
	Assuming imports at current level (58%)	Assuming Self-sufficiency
Population growth, demand at 4.6 tonnes of aggregate per head	4,016,000t	9,563,000t
ONS household projections	7,900,000t	18,810,000t

Table 13 shows that demand for crushed rock could exceed even the 11.54mt of permitted reserves data for 2013, the most recent year for which figures were available for Herefordshire separately for other counties.

It is acknowledged that these outcomes are not accurate, as they rely on several assumptions and on limited and dated information. However, without being able to publish up to date information due to commercial sensitivities, demand forecasting of crushed rock in Herefordshire will remain imprecise.

Local context: it is understood (from site visits undertaken towards the end of 2017, as part of the development of the Herefordshire MWLP), that both two active crushed rock quarries in the county are substantially worked out and both operators have advised that extensions will be required in the foreseeable future, to continue to extract limestone. In addition, planning conditions for Leinthall Quarry require the winning and working of minerals to cease by August 2027, therefore it is clear that additional reserves of crushed rock will be needed to meet demand from 2027 onwards. Perton has planning permission to continue operations until 2042.

Therefore, regardless of which demand forecast most closely represents the real outcome for crushed rock over the lifetime of the MWLP there will be a need for additional reserves of crushed rock to become operational to meet demand from 2027 onwards.

Local minerals planning policies: the Herefordshire MWLP allocates specific sites for future mineral extraction at Leinthall and Perton quarries, which would provide around 9 million tonnes of crushed rock. In addition, preferred areas for limestone working are identified. New operations in these areas would add to the robustness of supply in Herefordshire, increase self-sufficiency and allow for the county to make a reasonable contribution to the Managed Aggregate Supply System.

5.3 Secondary/Recycled Aggregate

Forecast demand: the Waste Needs Assessment (WNA) 2019, which has been produced as evidence supporting the production of the emerging Herefordshire Minerals and Waste Local Plan (Web Link) produced forecasts for arisings of construction, demolition and excavation (CD&E) waste in Herefordshire, based on the forecast change in GVA for the construction sector in Herefordshire and Worcestershire, produced by Experian. These are based on:

a) Scenario 1a: growth based on Herefordshire and Worcestershire construction sector GVA growth and a baseline figure of 393,000 tonnes in 2016 (calculated as per capita arisings using an UK per capita multiplier); and

b) Scenario 1b: growth based on Herefordshire and Worcestershire construction sector GVA growth and a baseline figure of 412,000 tonnes in 2016 (calculated as per capita arisings using an England waste per capita multiplier).

The forecasts are broken down into the key elements of the CD&E waste stream (non-hazardous construction and demolition waste, hazardous construction and demolition waste and dredging and excavation spoils) based on relative proportions estimated in 2014 and assuming that these remain constant. In this way, two forecasts for arisings of non-hazardous construction and demolition waste have been made, this being the element of the CD&E waste stream likely to be the source of recycled aggregates.

However, not necessarily all the arisings will be recovered for recycling. The latest figures from Defra[2] show that 94.3% of non-hazardous construction and demolition waste was recovered in England in 2022. The arisings forecast is shown in Table 14 below.

[2] Statistics on Waste Notice: Non-Hazardous Construction and Demolition Waste UK and England 2010-2016, Defra, March 2024

Table 14: Forecast arisings of recovered non-hazardous construction and demolition waste, Herefordshire, 2018 to 2041

Year	Using a UK per capita multiplier	Using and England per capita multiplier
2018	178,139	195,104
2019	172,601	188,538
2020	138,450	151,956
2021	157,833	172,592
2022	163,371	179,158
2023	165,217	181,034
2024	167,063	182,910
2025	169,832	185,724
2026	173,524	190,414
2027	177,216	194,166
2028	180,908	198,856
2029	185,523	202,608
2030	189,215	207,298
2031	192,907	211,050
2032	197,522	215,740
2033	201,214	220,430
2034	205,829	225,120
2035	209,521	229,810
2036	214,136	234,500
2037	218,751	240,128
2038	223,366	244,818
2039	227,981	249,508
2040	232,596	255,136
2041	238,134	260,764

The forecasts indicate that up to 261,000 tonnes of recycled aggregates could be gained from non-hazardous construction and demolition waste in Herefordshire by 2041.

It is considered, in the Minerals and Waste Local Plan, that the former Lugg Bridge Quarry waste recycling site has the potential for a substantial increase in capacity (from 250,000) over the Plan period up to 2041, by way of an extension. Therefore, this is identified as the preferred location for additional CD&E waste recovery followed, in order of preference, by strategic employment areas and industrial estates, and active minerals workings (recognising that the lifetime of the waste treatment facility may be limited to the lifetime of the quarry).

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6. Assessment of Other Demand/Supply Indicators

6.1 Purpose and Scope

The WMAWP has agreed a set of indicators to be included in Local Aggregates Assessments, which are intended to provide additional contextual information about local factors which could affect the supply of and demand for aggregates. The purpose is to highlight any information which could be a reason for departing from the use of the 10-year sales averages for sand and gravel and crushed rock. The scope of the indicators covers the following fourteen subjects and recommended method of collecting relevant data.

Demand Forecasting Indicators

i. Gross housing completions (refer to MHCLG live tables on housing supply), compared with housing targets. These are set over the past 10 years, or a shorter period. Targets are taken from an up-to-date local plan and/or Government's standard methodology. See **Table 16** below.

ii. Employment land completions, compared with requirements. Consideration is given to strategic local plan employment allocations only. Information is taken from Authority Monitoring Reports and/or Employment Land Reviews. Timeline: over local plan period to date. The Core Strategy target is provision of 148 Ha of employment land over 20 years, with 37 ha of deliverable employment land at all times. There is around 3.8 ha of employment land committed in the county in 2023. Between 2021 and 2023 under 5ha of employment land was delivered. This is expected to have negligible impact to demand and supply of aggregates.

iii. Large-scale local infrastructure requirements compared with delivery (refer to local strategic plans and National Highways website). This would include, for example, new roadbuilding. Local development plans, LEPs, local transport plans etc. provide evidence. The Core Strategy AMR contains the following two strategic developments: Southern Link Road and river crossing by 2022. This has not been achieved, with work anticipated to commence in 2025; and the City Link Road, which is now complete. In 2017, Herefordshire Council, in partnership with; The Marches Local Enterprise Partnership, the Growing Mid Wales Partnership, the Welsh Government, Ceredigion, Gwynedd, Powys, Shropshire and Telford and Wrekin Councils, developed and adopted a Freight Strategy for the region. The strategy identifies the Hereford bypass, Southern Link Road, and the Leominster bypass as major schemes which will reduce the impact of bottlenecks on the Freight Route Network (FRN). Between 2022-2023 Herefordshire Council put £25.568 million towards road improvements including DfT Grant funding. This is not expected to have a major impact to demand for aggregates.

iv. NSIPs and other major projects, either in the mineral planning authority area or nearby, e.g. HS2 or Commonwealth Games. Note: developers should be encouraged to provide materials audits which could be used to predict 'significant future increases in demand that can be forecast with reasonable certainty' (refer to PPG). No such projects existed in Herefordshire or nearby over the monitoring period.

v. 3-year aggregate sales average. Figures for sand and gravel and crushed rock cannot be published for reasons of commercial confidentiality.

vi. Ten Year annual sales averages. These can prove useful for comparison and context. Sand and gravel: at 2023 the 10-year sales average is 0.199mt. Crushed rock 10-year average sales figures for Herefordshire alone are unavailable, due to records having been amalgamated with other minerals planning authorities in previous years, for reasons of commercial confidentiality.

Supply Indicators

vii. Quality and/or capacity constraints of existing permitted reserves. Data is compared for the overall potential permitted capacity of sites, with the level of provision made in the MLP and/or with current 10-years sales average. Consideration is given to the projection of the comparison over the next 10 years or over the remaining period of 'time horizon' of the Minerals Local Plan. Due to the commercial sensitivity of the data, this information cannot be published.

viii. Windfall minerals permissions/trends. Could elevated levels of windfall permissions mean that these sites should have been included in local plan allocations? Or could this indicate that the minerals industry prefers to bring sites forward though planning applications, rather than through the local development plan process? No such applications were received during the period of this LAA.

ix. Progressive exhaustion of permitted reserves over Plan period and permitted lifespans of productive sites. Comparison of sales against data on the number of operational sites and new permitted reserves (assess replenishment rates). Recording the number of sites that have ceased production of aggregates and comment on reasons for cessation if possible. Record cessation dates for mineral production at permitted sites. No sites have ceased production over the monitoring period. Highlight sites where the MLP includes allocations for the extension of existing sites and the potential duration of continued production from allocated sites. The draft MWLP contains allocations for the extensions of existing permitted quarries. No new permitted reserves have come forward during the period of this LAA.

x. Transport constraints affecting markets for aggregates, e.g. lack of rail freight opportunities. Note output restrictions on permitted sites (number of lorry movements/ tonnages). Most mineral from, to and within Herefordshire is transported by road. There is one rail siding at Wellington Quarry which is used to transport mineral to southeast England, mainly from quarries in Wales. No other alternatives to road exist. No transport restrictions within planning permissions for sand and gravel or crushed rock.

xi. Levels of imports and exports. Data is not always complete/reliable. Review data from AM Survey 2019 and compare with AM 2014. Please see **Appendix 1**.

xii. Limited geological reserves. This should be a generalised assessment, not specific to permitted quarry operations. Note the LUC study for previous regional apportionment, which considered the extent of aggregate resources and its constraint by international/ national designations for the environment or culture. The volume of unsterilised sand and gravel outside international and national designations is: 2,222.68mt. The volume of unsterilised crushed rock outside international and national designations: 2,042.49mt.

xiii. Contribution from alternative aggregates. Record permissions for: new/extended waste facilities with capacity for producing recycled aggregate - none. New/extended facilities for producing secondary aggregate from industrial by products - none. Permissions for major

development involving redevelopment of previously developed land involving demolition/land clearance works - none.

Table 15: Housing targets and completions

Targets		Completions		
Year	Core Strategy housing trajectory	Year	MHCLG	AMRs
-	-	2013-14	280	331
-	-	2014-15	310	774
-	-	2015-16	250	327
2016	980	2016-17	190	405
2017	1177	2017-18	360	776
2018	1102	2018-19	740	666
2019	844	2019-20	630	904
2020	751	2020-21	550	643
2021	820	2021-22	750	973
2022	908	2022-23	650	704
2023	985	2023-24	650	1060
2024	920	-	-	-
2025	1013	-	-	-
2026	971	-	-	-
2027	983	-	-	-
2028	905	-	-	-
2029	955	-	-	-
2030	943	-	-	-

6.2 Findings and Conclusions

Data and other information have been collected to populate the indicators in section 6 above.

Assessment of the data leads to the following findings:

- Information on employment land completions and large-scale infrastructure projects shows no significant demand is anticipated.

- As of April 2023, there is a total of 4,096 dwellings that are committed in Herefordshire. It is thought that this would not be of significant impact to the supply of aggregates.

- The three-year and ten-year average sales have increased over the past three years by 0.02% and 0.16% respectively for sand & gravel. This is a marginal increase, but this follows past trends with fluctuations of the average sales. It is expected to continue such a trend.

- For Crushed Rock due to the commercial sensitivity of the data, further analysis cannot be provided in detail. However, looking at the 6-year sales average, sales have been relatively consistent over the year showing a steady demand and supply.

- All bar Perton quarry (2042) are required to cease operations before the end of the MWLP, 2041. Therefore, new allocations and areas of search have been identified in the MWLP. No windfalls have been permitted in recent years and no new reserves permitted since 2019.

- Levels of imports and exports of sand and gravel and crushed rock have changed slightly between 2014 and 2019. Exports of sand and gravel have decreased by up to 20% and imports have increased by up to 10%, indicating that consumption has increased in the five-year period (see also table 9). Exports of crushed rock have decreased by up to 10% while imports have also decreased by up to 30%, suggesting a fall in consumption (see table 9). However, given the fluctuations in consumption shown in table 9 for both sand and gravel and crushed rock, it is not considered that this indicator shows a reliable long-term trend in supply and demand.

- Geological reserves within Herefordshire do not appear to be significantly constrained by international/national designations.

- Herefordshire has no supply of secondary aggregates. While the capacity for recycled aggregate production has increased through the MWLP, supply in recent years has been well below current capacity and therefore cannot reliably be expected to provide a significantly increased quantity to substitute for primary aggregates.

The conclusion is drawn from the above assessment and the detailed data in the appendix that there is no information on the local context that would clearly justify departing from the use of a 10-year average for estimating the supply of and demand for aggregates. Using the 10-year landbank guidance Herefordshire has above the minimum requirement from the NPPF in both sand & gravel and crushed rock. However, having regard to the current end dates of the permitted quarries, new permissions will be required to maintain and adequate and steady supply of minerals beyond 2027.

Herefordshire Council

Appendix 1 – Levels Imports and Exports 2014/2019

Exports		
Remainder of South Wales	1-10%	<1%
Shropshire and Telford & Wrekin	1-10%	<1%
Worcestershire	10-20%	10-20%
Imports		
Gloucestershire County Council	1-10%	1-10%
Staffordshire County Council	30-40%	20-30%
Worcestershire County Council	10-20%	30-40%

Crushed Rock		
Exports		
Scotland	-	1-10%
Gloucestershire	<1%	1-10%
Unknown Destination	1-10%	-
Unknown Destination but somewhere in North Wales	1-10%	-
Shropshire and Telford & Wrekin	1-10%	<1%
Worcestershire	10-20%	20-30%
Remainder of West Midlands	1-10%	<1%
Imports		
Gloucestershire	1-10%	10-20%
Somerset	10-20%	<1%
South Gloucestershire	1-10%	1-10%
Leicestershire	1-10%	<1%
Shropshire	1-10%	1-10%
Telford and Wrekin	-	1-10%
Powys	40-50%	20-30%