

Minerals Local Plan Background Document

Worcestershire Local Aggregate Assessment 2016

August 2016

**Data covering the period up to
31/12/2015**

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Regional and national data updates which have been published recently.

- 2.4. A separate background document has been prepared to set out how the Council will approach the issue of the steady and adequate supply of industrial and energy minerals³.

Next steps

- 2.5. The Local Aggregate Assessment will be updated annually in consultation with the West Midlands Aggregate Working Party (WM AWP) and other AWP's as required, and will be published by the Council as part of the Minerals and Waste Local Development Scheme Annual Monitoring Report (AMR) in December each year. The current and previous AMRs are available on www.worcestershire.gov.uk/AMR. If you would like to be

- 3.7. The supply of recycled materials will depend on the county's capacity to process these materials. The Waste Core Strategy⁷ sets targets for capacity at static plant, but due to data limitations it is not possible to

Potential to increase contribution from secondary and recycled materials

- 3.12. Despite the current lack of information on the level of use of secondary and recycled materials locally, these account for 29% of the total market nationally.⁹
- 3.13. We are not aware of any potential drivers that would result in significant increases in arisings or recovery for these materials. We also have no evidence to indicate whether Worcestershire is likely to produce any more or any less than the national average.
- 3.14.

4. Marine sand and gravel

- 4.1. Sand and gravel deposits occur in many offshore areas around Britain. Most dredging takes place in coastal waters less than 25 km offshore and in water depths of between 18 m and 35 m. Marine aggregates can have special qualities which meet particular specifications.
- 4.2. Worcestershire is an inland county and as such has no marine resources. There are also no ports that land marine-won aggregate in the county. However, a national survey¹¹ showed that a relatively small amount (13,000 tonnes) of marine sand and gravel was imported into Worcestershire in 2009 (compared with 12,000 tonnes imported into Herefordshire and Worcestershire together in 2005).
- 4.3. As an inland county, the Worcestershire Minerals Local Plan cannot make provision for the production of marine sand and gravel. We have no evidence that there is a particular demand for marine-dredged aggregates in Worcestershire, and it is likely that this relatively low level of imports is simply a normal function of the commodities market for aggregates.
- 4.4. Worcestershire does not have any rail depot for the import or export of minerals. Water transportation takes place on the River Severn, but this is limited to moving "as-

5. Primary Aggregates: Sand and Gravel

- 5.1. There are two distinct types of sand and gravel deposits in Worcestershire:
- Bedrock deposits: solid sands of the Kidderminster Formation and Wildmoor Formation
 - Surface deposits: river terrace deposits of the rivers Severn and Avon and glacial deposits found in association with boulder clay
- 5.2. The solid sands, river terrace and glacial deposits will be considered

Estimating demand

10 years sales average

- 5.3. The starting point for setting a production guideline for sand and gravel in the LAA is to estimate demand on the basis of a rolling average of 10 years sales data (the 10-year average) before considering other relevant local information.

5.7. The 10 year average of sales from 2006-2015 including combined data for 2012-13 is 0.637 million tonnes. This is 18.5% higher than the 2015 sales figure.

5.8. The 10-year average has a number of weaknesses that make sole reliance on it undesirable:

sales will vary depending on both supply and demand factors in the market, and basing a production guideline on this alone could risk following historical trends rather than meeting future demand; it incorporates combined data with Herefordshire which could skew the average;¹⁶

it includes data from a period of significant economic downturn and therefore may not represent the demand likely to be experienced as the economy recovers; and

the adopted Minerals Local Plan was beyond its expected implementation period, with a limited number of Preferred Areas and saved policies, which could have limited operator interest in bringing sites forward in Worcestershire during this time, thereby depressing the annual sales figure.

5.9. Therefore, whilst the 10-year average is considered to be the best starting point, it needs to be sense-checked against other indicators.

3 year sales average

5.10. An average of the last 3 years sales (including combined data for 2013) gives an indication of the most recent sales trends to identify the general trend of demand.

5.11. The 3 year average from 2013-2015 is 0.572 million tonnes. This is 10% lower than the 10 year average, but 6.4% higher than the 2015 sales figure. The trend highlighted by this 3 year average does not appear significant enough to indicate that it would be appropriate to alter the production guideline from the 10 year average.

¹⁶ If we were to discount the combined data for 2012 and 2013, the average over the 8 remaining years between 2006-2015 is also 0.637 million tonnes when rounded to 3 decimal places (10 year average of 0.6372 million tonnes compared to 8 year average of 0.63665 million tonnes).

Figure 1. Sand and gravel annual and average sales

Sub regional apportionment

5.12.

5.14. In the Inspector's Report on the partial review of the Northamptonshire Minerals and Waste Local Plan,¹⁸ (the national guidelines) were based on production before the recession and within a different policy context, it would not be prudent to accord them very

5.15. This suggests that it would not be appropriate to increase the

Figure 2. Sand and gravel sales versus housing completions

5.19. The Mineral Products Association states that the construction of a typical

Figure 3. Percentage of sand and gravel sales estimated to be used in housing completions

5.21. There are no figures available to indicate the level of demand other types of development might create.

5.22. Whilst it is recognised that significant levels of development are proposed in the Local Plans and Strategic Economic Plan in Worcestershire, the variability in the proportion of demand from housing development and lack of data for other forms of development indicate that it would not be appropriate for the production guideline in this LAA to deviate from the 10 year average on the basis of projected housing numbers.

Supply optio

5.24. None of the sites has conditions attached to its planning permission which would restrict the productive capacity of the site.

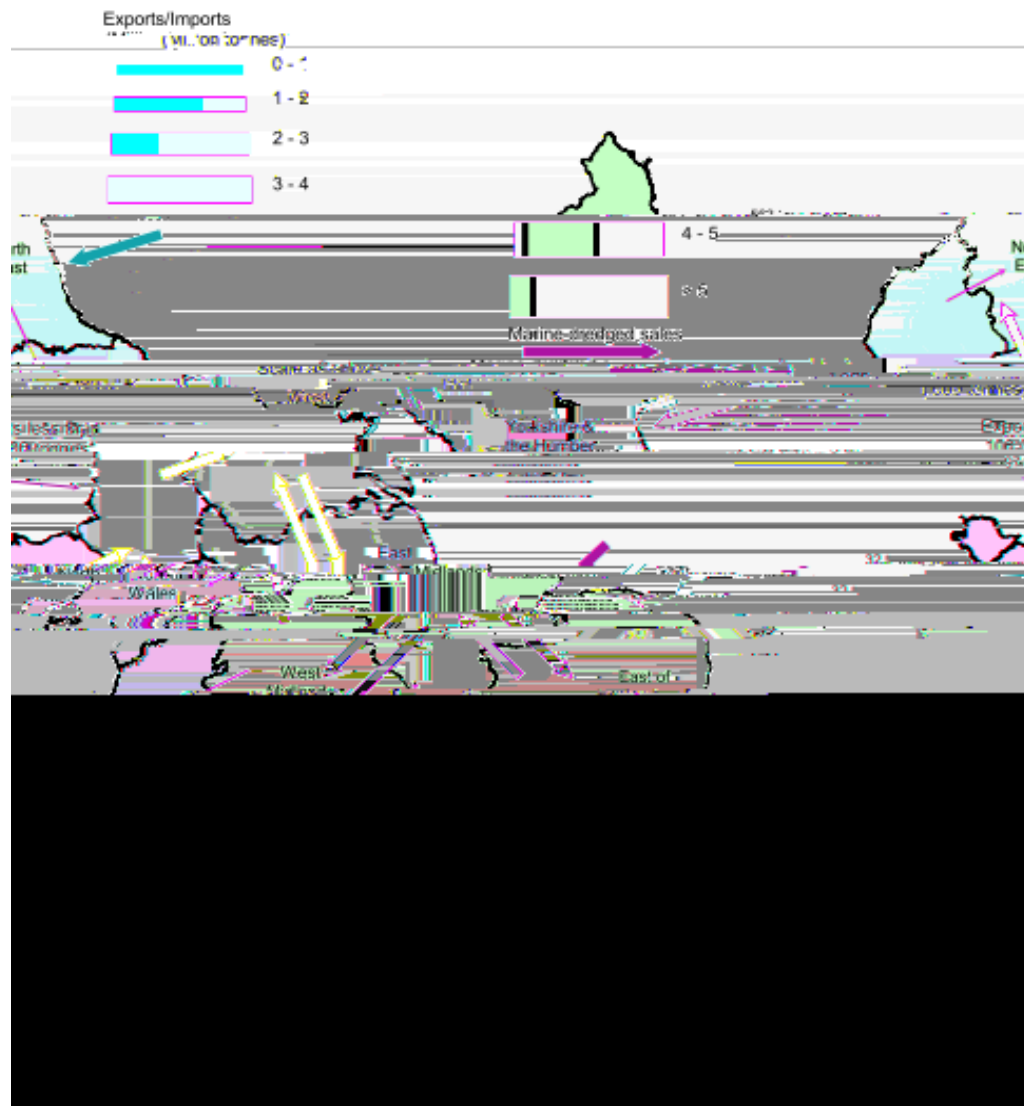
Table 3. Sand and gravel sites in 2015

Site name	Company	Location
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*that Plan are still outstanding it suggests that they are undeliverable and should not be relied on"*²⁴.

5.29. Two calls for sites have been undertaken in the development of the new Minerals Local Plan. A number of potential sites for sand and gravel

Figure 4. Sand and gravel inter-regional flows, 2009



Source: "Collation of the results of the 2009 aggregate minerals survey for England and Wales" Communities and Local Government (October 2011)

5.31. The data which is available for Worcestershire in the *Aggregate minerals survey for England and Wales (2009)* is presented in Table 4, Table 5, and Table 6, showing that Worcestershire was a net exporter of sand and gravel in that year.

Table 4. Exports: Sales of primary sand and gravel from Worcestershire by principal destination sub-region in 2009

Destination	Land-won sand and gravel	MPA %
Worcestershire	114,000	52%
West Midlands	59,000	27%
Elsewhere	45,000	21%
Total	218,000	-

Source: "Collation of the results of the 2009 aggregate minerals survey for England and Wales" Communities and Local Government (October 2011) p82

Table 5. Imports: Sales of primary sand and gravel to Worcestershire in 2009

	Land-won sand and gravel	Marine sand and gravel	Total sand and gravel
Worcestershire	45,000	13,000	58,000

Source: "Collation of the results of the 2009 aggregate minerals survey for England and Wales" Communities and Local Government (October 2011) p95

Table 6. Balance of aggregate exports and imports in Worcestershire in 2009

	Exports	Imports	Balance
Sand and Gravel	104,000	58,000	Net exporter

Source: Based on data in "Collation of the results of the 2009 aggregate minerals survey for England and Wales" Communities and Local Government (October 2011)

5.32. Worcestershire does not have any rail depot for the import or export of minerals. Water transportation takes place on the River Severn, but this is limited to moving "as-dug" material from one site in Worcestershire to processing plant at another. The wharves at these sites therefore do not currently enable imports or exports of minerals. It is therefore concluded that all imports and exports currently take place by road transport.

6. Primary Aggregates: Crushed Rock

6.1. The bedrock geology in Worcestershire includes the following mineral deposits which are believed to be the only strata in the county that have been worked to produce crushed rock aggregates since 1947: ²⁶

The Precambrian "Malverns Complex" and "Warren House Formation";

The Silurian "Woolhope Limestone Formation"²⁷;

The Ordovician "Lickey Quartzite Formation"; and

The Jurassic "Inferior Oolite Group".

6.2. These Precambrian, Silurian, Ordovician and Jurassic deposits will be reported in the LAA report.

Estimating demand

10 year sales average

6.3. The starting point for setting a production guideline for crushed rock in the LAA is to estimate demand on the basis of a rolling average of 10 years sales data (the 10-year average) before considering other relevant local information.

6.4. Table 7 and Figure 5 show the levels of crushed rock sales in Worcestershire and Herefordshire over the last 10 years (2006

6.6. Previous versions of the LAA made the assumption that a third of the combined crushed rock sales data was attributable to Worcestershire. In order to calculate the 10 year average, this assumption has been used for the combined data for 2006-2009. On this basis, the 10 year average of sales from 2006-2015 is 0.036 million tonnes.

6.7. The 10-year average has a number of weaknesses that make sole reliance on it undesirable:

- sales will vary depending on both supply and demand factors in the market, and basing a production guideline on this alone could risk following historical trends rather than meeting future demand;

- it uses assumptions on the proportion Worcestershire contributed to the combined data with Herefordshire which makes the average somewhat unreliable;

- it includes data from 2006-2009 which is significantly lower than the 2010-2015 period.

variability in the proportion of demand from housing development and lack of data for other forms of development indicate that it would not be appropriate for the production guideline in this LAA to deviate from the 10 year average on the basis of projected housing numbers.

Supply options / constraints

Indigenous supply

6.21. There were no sites with permitted reserves of crushed rock at 31st December 2015, and no planning applications for working crushed rock are pending decision. This means that Worcestershire has no permitted reserves, no productive capacity and no landbank for crushed rock.

6.22. There has been very limited market interest in working crushed rock in Worcestershire³³ for many years and there are multiple factors relating to crushed rock resources in Worcestershire which may make it difficult for them to be worked. Of the land containing crushed rock resources in Worcestershire³⁴:

approximately 15% is adjacent to or within 2.5km of Bredon Hill Special Area of Conservation,
99.5% is within the Cotswolds AONB or Malvern Hills AONB³⁵ and The Malvern Hills Conservators control approximately 75% of the land containing crushed rock resources in the county and have a unique responsibility to protect land in their control from harm from quarrying activities.³⁶

6.23. The delivery constraints outlined above, the lack of interest in Worcestershire's resources shown by the minerals industry over many years, and the fact that no sites for crushed rock have been proposed in response to "calls for sites" in 2014 and 2015 indicate that it is unlikely that Worcestershire will be able to provide crushed rock for the foreseeable

³³ Operations on two sites ceased due to the poor quality of the material. The county's last operational site was fully worked and ceased production in 2010. No sites for crushed rock have been put forward in response to the two "call for sites" consultations undertaken in 2014 and 2015 as part of the preparation of the Minerals Local Plan.

³⁴ Resource identified as *key* or *significant* in "Analysis of Mineral Resources in Worcestershire"

³⁵ Based on resources classified as Key or Significant in "Analysis of Mineral Resources in Worcestershire"

http://www.worcestershire.gov.uk/info/20015/planning_policy_and_strategy/17/emerging_minerals_local_plan_background_documents/3

³⁶ "The hills are to be preserved as a natural beauty and so placed as to cause as little injury and disfigurement to the hills as reasonably practicable". In 1924 a further private act of Parliament gave the Malvern Hills Conservators the authority to compulsorily purchase land and property rights to prevent further land use for quarrying. In 1953 the Minister of Housing and Local Government determined permissions relating to four of the remaining five quarries refusing permission on part or all of these sites in order to preserve the skyline and appearance of the Hills. It is unlikely that large scale mineral working will take place in the Malvern Hills in the future, although this is not specifically prevented by the Acts. See Background Paper: The Malvern Hills Acts for further details
http://www.worcestershire.gov.uk/downloads/file/495/background_document_the_malvern_hill_s_acts

future. These issues have been discussed in detail with the Aggregate Working Parties in the West Midlands, South West, East Midlands and South Wales.³⁷ These discussions highlighted that cross-boundary movements of crushed rock into Worcestershire have occurred for some time and are likely to continue into the future, but that the level of supply has been relatively small and has not undergone notable fluctuation over time.

6.24. This indicates that Wor

Figure 8. Crushed rock inter-regional flows, 2009

Source: "Collation of the results of the 2009 aggregate minerals survey for England and Wales" Communities and Local Government (October 2011)

- 6.26. The data which is available for Worcestershire in the *Aggregate minerals survey for England and Wales (2009)* shows that there were no sales of crushed rock from Worcestershire in 2009, but that 192,000 tonnes were imported and consumed in the county. It is not possible to identify the source of this material.
- 6.27. Worcestershire does not have any rail depot for the import or export of minerals. Water transportation takes place on the River Severn, but this is limited to moving "as-dug" material from one site in Worcestershire to processing plant at another. The wharves at these sites therefore do not currently enable imports or exports of minerals. It is therefore concluded

Conclusion: Balancing supply and demand

- 6.28. Whilst a 10 year average of crushed rock sales has been calculated as 0.036 million tonnes and there is no evidence that demand for crushed rock is likely to decrease, there has been no production of crushed rock in Worcestershire since 2010. There are significant constraints on delivering crushed rock production in Worcestershire and there has been a lack of interest from mineral developers to work the crushed rock resources in Worcestershire. These are all strong indicators that the 10 year average is not suitable. Discussions with the West Midlands, East Midlands, South West and South Wales Aggregate Working Parties concluded that Worcestershire's production guideline for crushed rock should be reduced to 0 tonnes, but with the emerging Minerals Local Plan providing a policy framework which could enable crushed rock development to take place.
- 6.29. Worcestershire has no permitted reserves, no productive capacity and no landbank for crushed rock. There is no data available to indicate how much of the demand for crushed rock has been met by substitution with either secondary or recycled materials or by sand and gravel. It is likely that the majority of demand has been met by increased imports of crushed rock from outside the county. This has been discussed in detail with the West Midlands, East Midlands, South West and South Wales Aggregate Working Parties. The Mineral Planning Authorities and Aggregate Working Parties have indicated that supplying Worcestershire's demand for crushed rock can be accommodated.
- 6.30. This LAA therefore concludes that the production guideline for crushed rock in Worcestershire should be 0 tonnes per annum.**

- 7.9. This LAA therefore concludes that the production guideline for crushed rock in Worcestershire should be 0 tonnes per annum.

Transporting minerals

- 7.10. Worcestershire does not have any rail depot for the import or export of minerals. Water transportation takes place on the River Severn, but this is limited to moving "as-dug" material from one site in Worcestershire to processing plant at another. The wharves at these sites therefore do not currently enable imports or exports of minerals. It is therefore concluded that all imports and exports currently take place by road transport.

- 7.11. Transportation from any future minerals sites will be considered through the planning process and subject to the policies of the Mineral Planning Policy (MPP) 2010 (i) 3(n) 4(fb) 4(j) - 2-13 (e).

Appendix 1: Consultation with Aggregate Working Parties

A draft of this Local Aggregates Assessment was sent to the West Midlands, East Midlands, South West and South Wales Aggregate Working Parties for consultation in July 2016. The following comments were received from the AWP's and their members:

West Midlands Aggregate Working Party

The West Midlands AWP commented as a whole, and detailed comments were received from the Mineral Products Association.

West Midlands Aggregate Working Party

WM AWP comment: *"The AWP as a whole believes that the LAA meets the requirements as set out in relevant guidance. However, the Authority may wish to take into account comments made by neighbouring Authorities and industry in this or future revisions of the LAA. These comments are attached in the following Appendices: Mineral Products Association"*

WCC response: No action required in response to comments from the West Midlands Aggregate Working Party as a whole.

Mineral Products Association (MPA)

MPA comment: *"The document as a whole reads well and appears logical in the arguments put forward. However, from a readers point of view I would be inclined to change the order of the document and deal with primary aggregates sand and gravel and crushed rock as section 3 and 4 with secondary aggregates and marine going to section 5 and 6."*

WCC response: Whilst we agree that the proposed change in order could be easier for a reader, the National Planning Policy Framework (NPPF) requires Local Planning Authorities to *"take account of the contribution that substitute or secondary and recycled materials and minerals waste*

WCC response: No action required in response to comments

South Wales Aggregate Working Party

No comments were received from the South Wales AWP.