Local Aggregates Assessment (LAA)

1. Aggregates represent the most significant mineral produced in Shropshire. National policy guidance requires Shropshire to maintain an adequate and steady supply of aggregates during the current Plan period to 2026. The report has taken account of feedback from the review of LAA's completed by the secretariat of the West Midlands Aggregates Working Party in 2016. The West Midlands Aggregates Working Party (WMAWP) has agreed to use a ten-year rolling average as the principal indicator for aggregates production, consistent with national policy guidance. The West Midlands Aggregates Working Party (WMAWP) has considered and endorsed the content of this LAA.

2. 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 mineral aggregates to be made in the Local Development Plans for Shropshire. For clarity, this Local Aggregate Assessment takes into account the supply and demand of aggregates for Shropshire including the area administered by Telford & Wrekin Council. The majority of aggregate production takes place in the area administered by Shropshire Council. There is currently no sand and gravel working, but crushed rock from a single site in Telford & Wrekin contributes about a quarter of the annual sales. Both areas contain facilities where construction, demolition and excavation waste is recycled to produce aggregates. References to Shropshire in this document relate to the area administered by both Councils. The first section of the report reviews evidence relating to the supply of aggregates in Shropshire and the report then assesses other relevant information to provide a forecast for demand and the need for additional aggregate mineral resources. Headline performance indicators for minerals are illustrated in the Table below.

Table 1: Headline Mineral Monitoring Indicators 2016-17:

		Sand and gravel	Change	Crushed rock	Change
Production	**2016 production**	0.74 million tonnes	▲	2.69 million tonnes	▼
	3-year average	0.70 million tonnes	▲	2.86 million tonnes	▼
	10-year average	0.69 million tonnes	◀	2.39 million tonnes	◀
	Informatives	Production guideline based on 10-year average. No other relevant local information which indicates deviation from this average is currently required.		Production guideline based on 10-year average. No other relevant local information which indicates deviation from this average is required.	
Landbank	**Reserves**	11.69 million tonnes	▲	114.44 million tonnes	▲
	Landbank	16.94 years	▲	47.88 years	▲
	Minimum Landbank Required	7.00 years		10.00 years	
	Informatives	Despite having a large landbank, there are potential issues regarding productive capacity due to about 70% of reserves being contained within three sites which have been unworked for over 5 years. The Shropshire Local Plan (2015) allocates additional resources at three sites and the release of further resources is expected through windfall applications or the current Local Plan Review.		N/A	

Assessment of Aggregates Supply

Sand and Gravel

3. In 2016 there were 10 permitted sites for sand and gravel working in Shropshire, 5 of which were operational (see Appendix 1). There is also a further site where a resolution has been made to grant planning permission, but where consent has yet to be issued. The majority of the material produced is used locally within Shropshire to supply the construction industry with building sand, concrete and concrete products;

4. The majority of sand and gravel working in Shropshire is now from glacial or bunter deposits which are of more variable quality than river terrace materials which have now been largely worked out. Sand and gravel deposits in Shropshire frequently contain a high proportion of sand and more limited quantities of gravel and often suffer from clay and lignite contamination. These characteristics mean that deposits often require additional processing to generate a saleable product. In addition, about 70% of sand and gravel reserves, is contained in three site commitments which have remained unworked for over 5 years. In the case of two of these sites, the mineral operators and landowners concerned have confirmed that there is a clear intention to work these sites during the Plan Period;

5. The latest available data indicates that, at 0.74mt, sand and gravel production in Shropshire and Telford & Wrekin in 2016 is continuing to recover from lower levels of production in recent years and is now above both the 10 year rolling average for sand gravel sales (0.69mt) and the 3 year average (0.70mt).

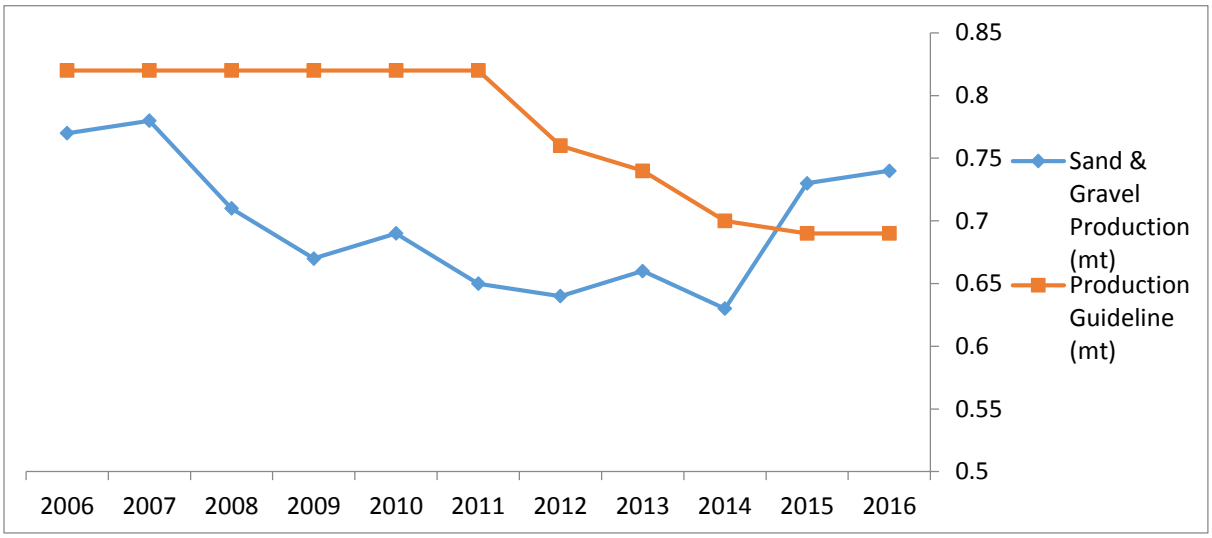
Table 2: Shropshire Sand & Gravel Sales and Production Guideline 2006-2016 (million tonnes [mt])

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Sand & Gravel Production (mt)	0.77	0.78	0.71	0.67	0.69	0.65	0.64	0.66	0.63	0.73	0.74
Production Guideline (mt)	0.82	0.82	0.82	0.82	0.82	0.82	0.74*	0.72	0.70	0.69	0.69

Source: AWP data 2006 - 2016

*Production guideline changes from sub-regional apportionment to 10 year average trend from 2012

Figure 1: Shropshire Sand & Gravel Sales and Production Guideline 2006-2016 (million tonnes [mt])



Sand and Gravel

6. Aggregates monitoring data for 2016 indicates that the market area for sand and gravel aggregates produced in Shropshire is generally local and whilst some material is supplied into adjacent areas to the north and west, only a limited amount of sand and gravel produced from Shropshire is currently exported eastwards to the main markets in the West Midlands conurbation due to the availability of more proximate and higher quality materials closer to these markets, although Shropshire continues to supply significant amounts of sand and gravel for construction activity in Telford. These trends are expected to continue;

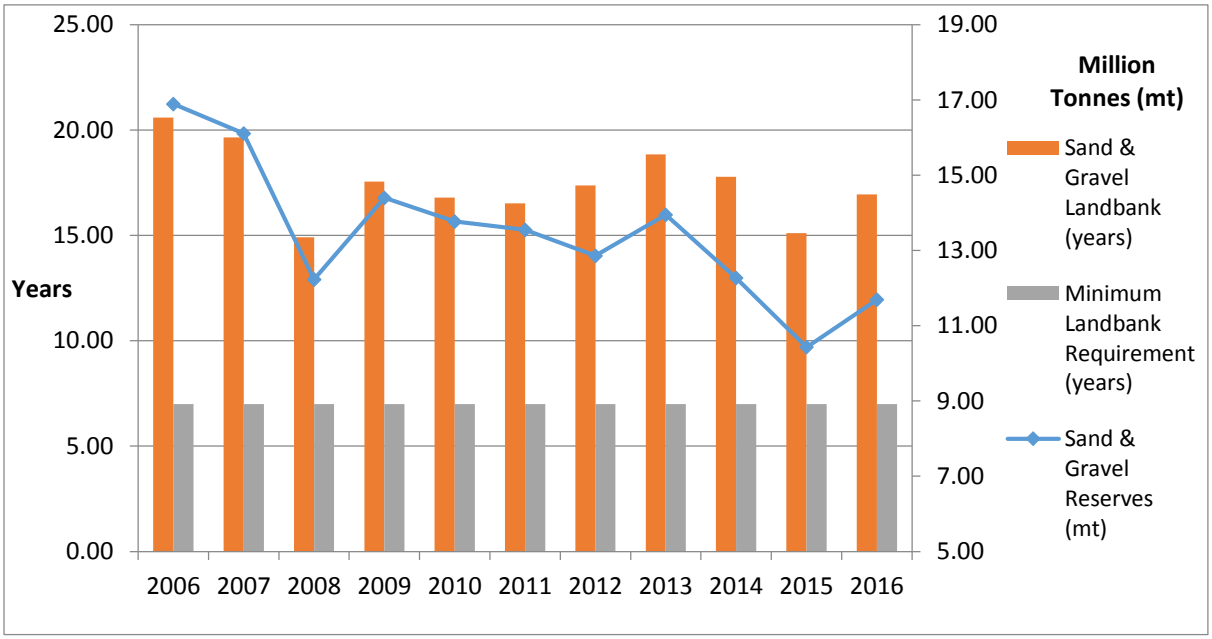
7. The landbank of permissions for sand and gravel working has remained consistently above the minimum level required by NPPF of 7 years. The permitted landbank was equivalent to almost 17 years' production in 2016. In taking planning decisions, Shropshire Council has responded positively to both planned and windfall applications to release more material to maintain productive capacity to counter balance the impact of the unworked site commitments referred to in paragraph 4 above. This is illustrated in Table 3 and Figure 2 below:

Table 3: Sand & Gravel Reserves and Landbank 2006-2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Sand & Gravel Reserves (mt)	16.89	16.11	12.23	14.40	13.77	13.55	12.86	13.95	12.27	10.43	11.69
Sand & Gravel Landbank (years)	20.60	19.65	14.91	17.56	16.79	16.52	17.38	18.85	17.45	15.05	16.94
Minimum Landbank Required (years)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

Source: local monitoring data

Figure 2: Sand & Gravel Reserves and Landbank 2006-2016



Crushed Rock

8. The area administered by Shropshire and Telford & Wrekin Councils also produced 2.69 mt of crushed rock in 2016 against a 10 year average of 2.39 mt. The area is currently responsible for producing over half of the regional requirement for crushed rock. Production of crushed rock from a single site in Telford & Wrekin contributes about a quarter of the annual production. Crushed rock is mainly used as engineering fill, roadstone and asphalt in road construction and maintenance. High specification aggregate is exported by both road and rail to a wider regional and national market area. In 2016 there were 8 permitted sites in Shropshire, 4 of which were operational and 1 permitted and operational site in Telford & Wrekin;

9. The latest available data indicates that crushed rock production in Shropshire and Telford & Wrekin in 2016 was significantly above the 10 year trend (2.39mt) but below the 3 year trend (2.86mt) see Table 4 below.

10. Aggregates monitoring data for 2016 indicates that 50% of production supplies markets within Shropshire and 29% supplies markets in other parts of the West Midlands region. However, the high polishing resistance of some crushed rock resources in Shropshire supports export to a larger market area, including by rail transport and about 21% of production supplies national markets outside the West Midlands, particularly the north-west (11% of production). These trends are expected to continue.

11. The landbank of permissions for crushed rock working has remained consistently above the minimum required level of 10 years. The permitted landbank of permissions was equivalent to almost 48 years' production in 2016. This is illustrated in Table 5 and Figure 4 below.

Table 4: Shropshire Crushed Rock Sales and Production Guideline 2006-2016 (million tonnes [mt])

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Crushed Rock Production (mt)	2.6	2.33	2.29	1.80	2.00	1.65	2.41	2.88	3.13	2.76	2.69
Production Guideline (mt)	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.36	2.39	2.39

Figure 3: Shropshire Crushed Rock Sales and Production Guideline 2006-2016 (million tonnes [mt])

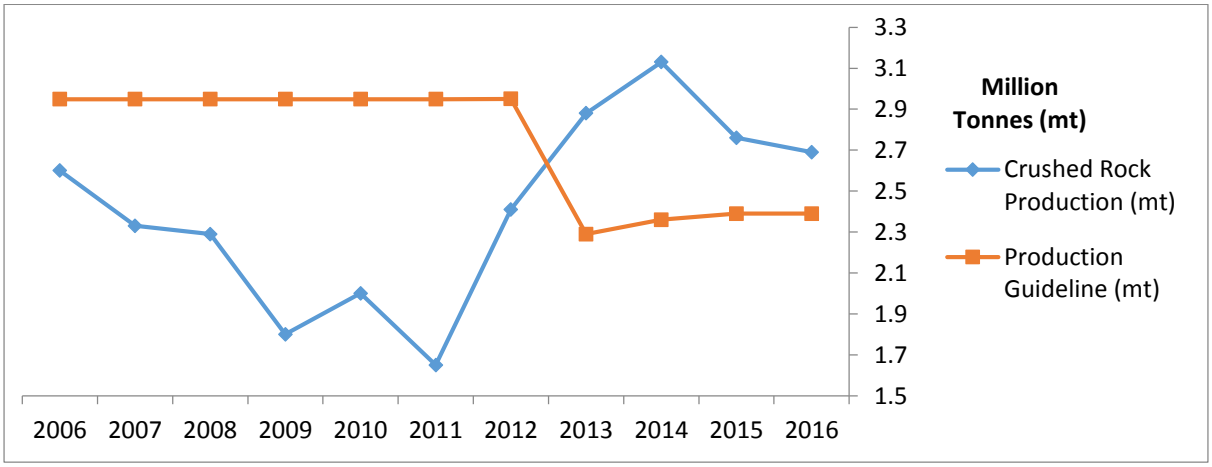
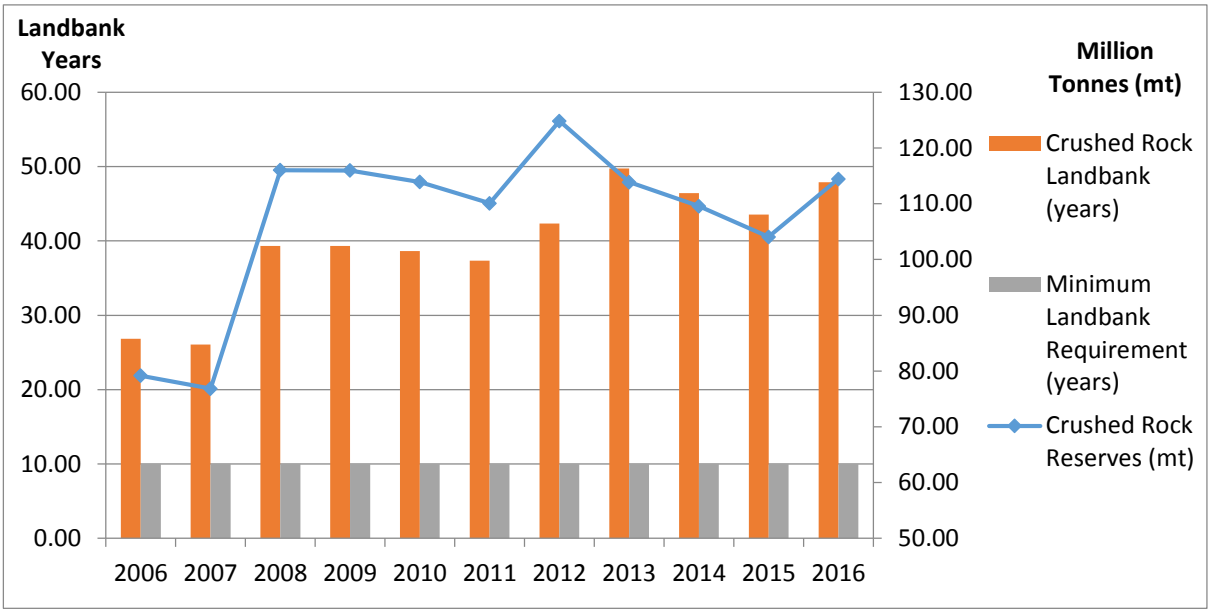


Table 5: Shropshire Crushed Rock Reserves and Landbank 2006-2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Crushed Rock Reserves (mt)	79.17	76.84	116.02	115.95	113.90	110.07	124.84	113.86	109.55	104.05	114.44
Crushed Rock Landbank (years)	26.85	26.06	39.34	39.32	38.62	37.32	42.32	38.60	46.42	43.54	47.88
Minimum Landbank Required (years)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Figure 4: Shropshire Crushed Rock Reserves and Landbank 2006-2016



Secondary Aggregates

12. Figures for secondary and recycled materials used as aggregates are currently only collected nationally and sub-nationally. The most recent information indicates that 4.37 million tonnes of construction and demolition waste was generated in Shropshire, Staffordshire and Telford & Wrekin in 2005 (Survey of Arisings and Use of Alternatives to Primary Aggregates in England [CLG 2007]). Of the material generated, 1.58 million tonnes (36%) was recycled as aggregate and 0.15 million tonnes (3%) was recycled as soil. A further 2.26 million tonnes (53%) was used as engineering material and 0.38 million tonnes (8%) was landfilled as waste. However, it is unclear whether this performance is applicable to Shropshire, since Staffordshire's economy is much larger and may therefore obscure trends in Shropshire. Limited information is available for Shropshire and Telford & Wrekin specifically: Environment Agency waste data suggests that about 0.4 million tonnes of inert waste generated in the two areas was handled at licensed waste management facilities in 2016, largely in Shropshire and neighbouring areas. Municipal waste data for 2016 indicates that about 7,000 tonnes of recycled aggregates were recovered from municipal recycling centres and a further 16,500 tonnes of incinerator bottom ash (IBA) was recovered from the energy recovery facility in Shrewsbury.

13. Construction and demolition waste is a high density, low value material which, due to transport costs and distances in a predominantly rural area, cannot be moved more than short distances on a cost effective basis. The latest available data indicates that around 97% of construction waste generated in Shropshire in 2012 was managed within the county. Of the construction and demolition waste which was used as engineering material or landfilled in 2005, it is estimated that a further 0.24 million tonnes could potentially be recycled as aggregate (derived from CLG 2007).

Future Aggregate Demand, Supply Options and Constraints

Forecast Demand for Aggregates: Planned Growth & Infrastructure

14. The Shropshire Local Plan establishes a strategic growth target of around 27,500 new homes and 290 hectares of employment in Shropshire for the period to 2026. Housing and employment land delivery has suffered in recent years and has been below the levels assumed in the Local Plan due to the recession. Development rates have now started to recover and this has increased local demand for construction aggregates. Whilst new development will also require investment in infrastructure, there are no known separate national or strategic infrastructure projects which are likely to significantly increase demand.

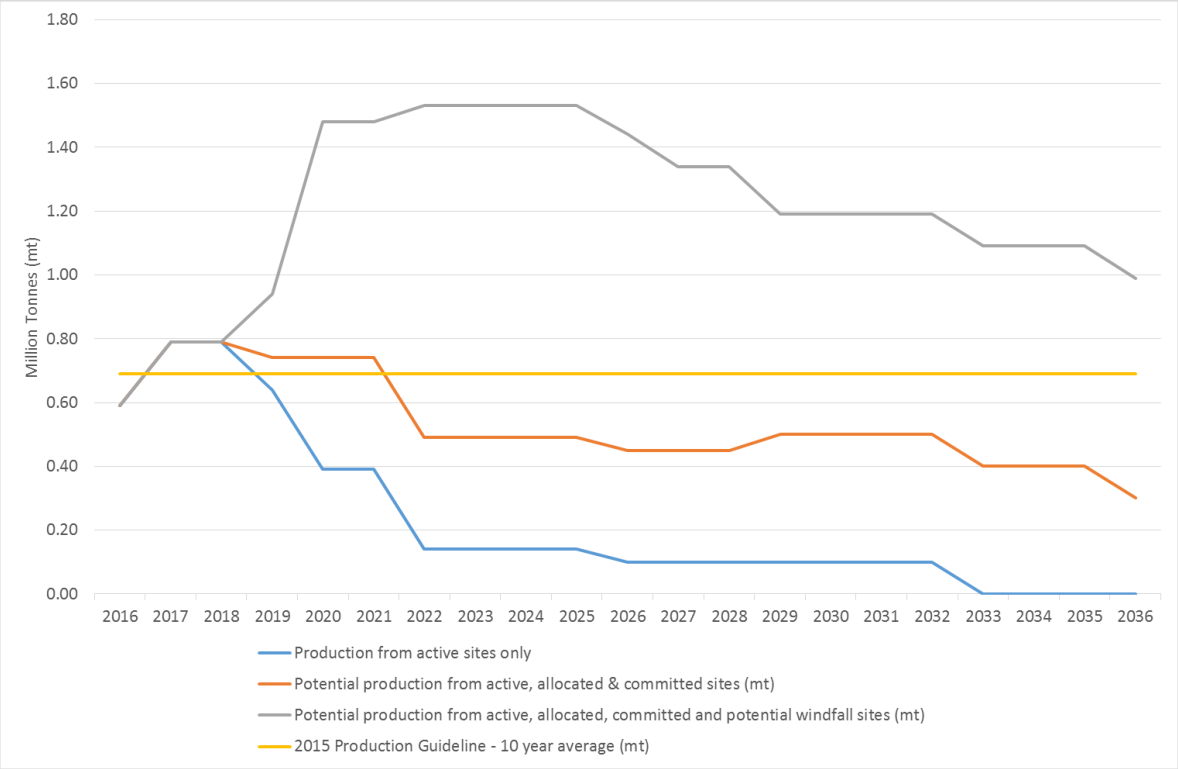
Balance between demand and supply:

15. The life of existing permitted reserves has until recently been prolonged by low levels of demand for aggregates and the size of landbanks for sand and gravel and crushed rock remain well above minimum guidelines. However, there are a number of quality and capacity constraints on the production of sand and gravel resources which are identified above. To reflect this, in Shropshire the recently adopted Local Plan supplements existing permitted reserves with additional allocations and a windfall allowance to ensure an adequate and steady supply for the period to 2026 as set out in the table below. Telford & Wrekin Council have considered future demand for aggregate minerals during the development of their new Local Plan. Since the majority of the aggregates produced are used locally within Shropshire to supply the construction industry with building sand, concrete and concrete products, no separate provision is made for specific market sectors.

Table 6: Shropshire Local Plan Assessment of Production Potential (million tonnes)

	Production Potential 2012 – 2026
Production Requirement	11.48
Existing Reserves at Operational & Committed Sites	8.96
Preferred Allocations	4.40
Windfall allowance	1.0
TOTAL Production Potential	**14.36**
Production surplus	**2.88**

Figure 5: Assessment of Potential Future Sand & Gravel Productive Capacity in Shropshire 2016 - 2036



Mineral Transport and Handling Facilities

16. Mineral aggregates produced in Shropshire are moved almost exclusively by road. However, the Shropshire Local Plan identifies and safeguards a number of railfreight facilities, including rail sidings at Bayston Hill near Shrewsbury and the Oswestry mineral railway (Cambrian Line). The railfreight terminal in north Telford is not currently used to move mineral aggregates but could potentially be used for this purpose in future.

LAA Conclusion

17. The rates of housing and employment development in Shropshire and Telford & Wrekin have started to recover following the recession, and this has increased demand for construction aggregates.

18. Whilst there are no known national or strategic infrastructure projects which are likely to increase demand, development rates are expected to continue to recover. Active and on-going engagement with neighbouring Mineral Planning Authorities suggests that the current general pattern of aggregate imports and exports can be expected to continue, although the progressive exhaustion of permitted reserves in south-west Staffordshire may start to result in additional demand from sites in eastern Shropshire and Telford & Wrekin.

19. There are a number of quality, capacity and transport constraints on the production of sand and gravel resources which mean that the market for

aggregates produced in Shropshire is generally local. In addition, there are a number of unworked site commitments which require significant capital investment and it is therefore assumed that these will not make any contribution in the short term.

20. Local information about secondary and recycled aggregates is generally dated and of poor quality. Whilst there are some existing and potential sources of secondary aggregates and a large number of local recycling facilities, low values and high transport costs and distances are likely to limit the contribution which these materials can make to supply.

21. Sufficient crushed rock aggregate resources are already available from permitted sites, but although the landbank remains well above the minimum guideline, additional sand and gravel resources are required to provide for flexibility and local competition. The Shropshire Local Plan (2015) therefore supplements existing permitted reserves for sand and gravel with additional allocations to ensure an adequate and steady supply. A number of planning applications for 'windfall' sites or site extensions are expected to be determined during the next year in Shropshire. These resources, if consented, would provide a significant boost to the local supply of sand and gravel. No additional allocations are currently proposed in Telford & Wrekin.