



Buckinghamshire Local Aggregates Assessment 2021



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Executive Summary

- 1.1. This Local Aggregate Assessment (LAA) for Buckinghamshire is produced under the requirements set out in the National Planning Policy Framework 2019 (NPPF). This LAA considers aggregate supply and consumption during 2021 from all known sources. Paragraph 213 of the NPPF requires Minerals Planning Authorities (MPAs) to produce an annual LAA. The LAA is intended to outline the sources of supply of and demand for aggregates within Buckinghamshire, make an assessment as to whether there is a shortage or surplus of supply, and how any shortages will be addressed.
- 1.2. Buckinghamshire is a landlocked area, and only produces sand and gravel, predominantly found in the south of the county. Since 2016 sales in Buckinghamshire have continued to increase to over a million tonnes per annum, apart from a minor drop in 2018. Sales were down in 2020 however with the much of the industry pausing at the start of the pandemic this would have been expected. However, sales in 2021 continued to increase exceeding sales in 2019. Rock aggregate is imported from Leicestershire, Somerset, and the West Country. Buckinghamshire is a net importer of sand and gravel, and it is believed that flows of sand and gravel into the north of the County take place from adjacent Mineral Planning Authority areas, including Milton Keynes, Northamptonshire, Bedford Borough, Central Bedfordshire, and Hertfordshire. In addition, Buckinghamshire is well connected to other sand and gravel producing areas, within the South-East, East of England, and East midlands former regions, such that the County is effectively part of a much larger sand and gravel aggregate producing area.
- 1.3. The level of permitted reserves of sand and gravel on 31st December 2021 were sufficient for 5.2 years based on the rolling average from the most recent 3 years sales, meaning Buckinghamshire doesn't have a 7 year landbank. The rolling average of the most recent 3 year's sales is a method of calculating the landbank, as advised in the planning practice guidance and the NPPF. The 3 years average sales have been used, because in the past 10 years period (2012-2021) 5 of these years have seen sales figures greater than the 10 year average, indicating an upward trend in our yearly sales figures.
- 1.4. There are several nationally significant infrastructure projects which have commenced in the past few years which cross Buckinghamshire. These include the construction of the HS2 (High Speed Rail 2) rail line and the East West rail line. As these projects are not located only with Buckinghamshire, it is uncertain whether they will source materials from quarries in Buckinghamshire as opposed to other neighbouring Counties which they also cross into.
- 1.5. The Buckinghamshire Minerals and Waste Local Plan (MWLP) was adopted in July 2019. The plan allocates sites for future mineral extraction with some sites coming forward

during the production of the plan. However, there are allocations in the plan still to come forward.

Rail Depot Sales (S & G)	-							-	There is one active Rail depot within Buckinghamshire, however data for sales in 2021 have not been attained. Estimation of sales cannot be achieved as no previous data is available.
Rail Depot Sales (Crushed Rock)	-							-	
General Comments:	To ensure that confidential figures are not disclosed, separate figures for Sharp Sand and Gravel are withheld. This reflects the fact that the Minerals and Waste Local Plan aggregate need is a combined figure.								

C- Confidential data

Introduction and Purpose of the Local Aggregate Assessment

- 1.6. Buckinghamshire Council (BC), as a Minerals Planning Authority (MPA), is required under the National Planning Policy Framework 2019 (NPPF) to prepare an annual Local Aggregate Assessment (LAA). The LAA provides an annual evaluation of aggregate supply and demand in the county and examines a rolling average of the most recent ten years sales data, as well as other relevant local information to develop an assessment of all supply options.
- 1.7. The former Buckinghamshire County Council adopted the Buckinghamshire Minerals and Waste Local Plan (MWLP) 2016-2036 in July 2019, which contained strategic policies for the provision of aggregate minerals in Buckinghamshire. This forms part of the development plan and continues to provide minerals policies for Buckinghamshire.
- 1.8. This document uses the most recently available information to monitor and review aggregate sales within county and provides information on the county's permitted reserves during the period January to December 2021.
- 1.9. Buckinghamshire is not a producer of crushed rock and imports all the crushed rock required for the county's needs. Since the county is not a producer of crushed rock it is not required to identify a landbank. Therefore, this report will not include sales and reserve data for crushed rock.

Aggregates in Buckinghamshire

Geology

- 1.10. The most significant of mineral resources in Buckinghamshire is sand and gravel. There are two areas in the county in which these can be found; the Thames and Colne Valley located in the south of the county and the Great Ouse Valley east of Buckingham in the north of the county. The MWLP identified Minerals Safeguarding Area in these areas to safeguard the known economically viable sand and gravel deposits against sterilisation through non-mineral development.
- 1.11. The county also has resources of Chalk, Clay with Flints, Woburn Sands and Limestone¹. There has been some small-scale extraction of chalk at Pitstone Quarry, and a single operational brickwork at Bellingdon which uses 'clay with flints' to produce traditional Chiltern bricks. While there is no active working of Woburn sands, there is a single dormant site in the west of the county. There is presently no extraction of limestone in the county.

¹ Available at [Buckinghamshire Minerals and Waste Local Plan 2016-2036](#) chapter 4 paragraph 4.1 to 4.13

1.12. Buckinghamshire does not have any significant hard rock resources and is not a producer of crushed rock. All crushed rock consumed within the county is imported and the county is reliant upon the ability of the exporting areas to be able to continue to supply this material.

Primary Aggregate

1.13. During 2021, there were 7 sites in Buckinghamshire actively producing sand and gravel. These sites are shown in Table 1. At the end of 2021, there were two outstanding applications awaiting determination. One for the extraction of 1mt at an allocated site. The other is for prior extraction of resource to facilitate a non-mineral development. This is being treated as a windfall resource which is anticipated to be 170,000 tonnes.

Table 1: Sand and Gravel Extraction Sites in Buckinghamshire during 2021

Sites	Site Operators	Planning Permission End Date
Beechwood Nurseries, East Burnham	Summerleaze Ltd	31/12/2024
George Green	Brett Aggregates	31/12/2024
New Denham Quarry, Denham	Summerleaze Ltd	31/12/2026
North Park, Richings Park	Cemex	31/12/2026
Denham Park Farm, Denham	Ingrebourne Valley Limited	28/02/2031
Slade Farm, Hedgerley	Ingrebourne Valley Limited	31/08/2031
Springfield Farm, Beaconsfield	Springfield Farm Ltd	30/09/2044

Sales

1.14. Total sales for the most recent ten years (2012-2021) of sand and gravel in Buckinghamshire are shown in Table 2 and Figure 1. These sales figures show that since 2012 there has been a general increase in sales of primary aggregate with sales figures for four of the last ten years being greater than 1m tonnes. The sales for the past 3 years have fluctuated with a dip in 2020 due to the COVID epidemic, although sales in 2019 and 2021 were the highest of the past 10 years. Despite the recent fluctuation in sales the 10-year average has continued to increase year on years.

1.15. In addition to the ten-year average provided in line with the approach detailed in the NPPF², the average of the most recent three years (2019-2021) sales data is given for comparison purposes. Due to increase in sales in 2 of the three years the sales average has increased when comparing to the previous 3-year average increasing from 1.01mt to 1.12mt.

² National Planning Policy Framework, Paragraph 145, DCLG 2012

1.16. It is worth noting that sales data for Buckinghamshire includes both sand and gravel and soft sand sales. This is due to being unable to publish a separate figure for soft sand due to its confidential nature.

Table 2: Sand and Gravel Sales in Buckinghamshire 2012 - 2021 (million tonnes)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10yr Average (2012-2021)	3yr Average (2019-2021)
Sales	0.66	0.77	0.69	0.74	1.03	1.17	0.98	1.21	0.84	1.27	0.94	1.12

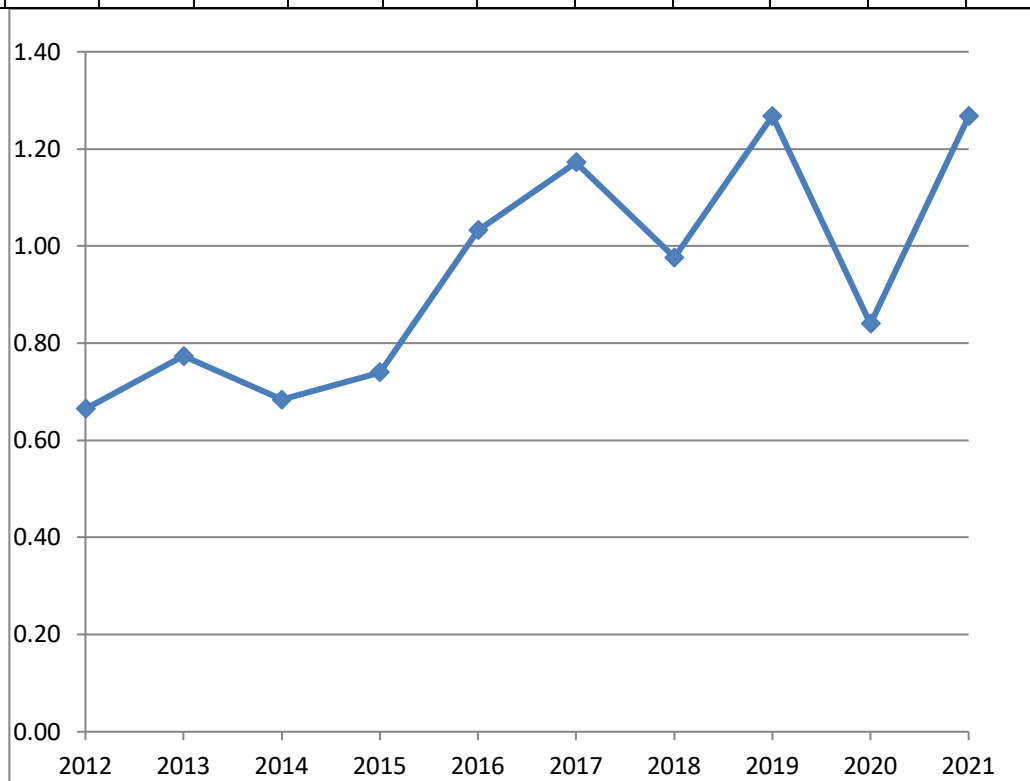


Figure 1: Sales of Sand and Gravel in Buckinghamshire (million tonnes) 2012-2021

Reserves

1.17. As of 31st December 2021, estimated permitted reserves of sand and gravel in Buckinghamshire totalled 5.8mt. Figure 2 shows that permitted reserves within Buckinghamshire have been in decline since 2017 but planning applications approved during 2017 and 2018 have helped to increase the permitted reserves and maintain a 7-year landbank figure, up until the end of 2021. However, with no new reserves and increased sales, reserves have dropped below what is required to maintain a 7-year landbank.

Table 3: Permitted Reserves of Sand and Gravel in Buckinghamshire (2012-2021)

Years	Permitted Reserves	Years	Permitted Reserves
2012	10,049,244	2017	10,676,936
2013	9,143,356	2018	10,652,513
2014	10,074,537	2019	7,960,008
2015	9,045,955	2020	8,616,983
2016	8,221,250	2021	5,856,411

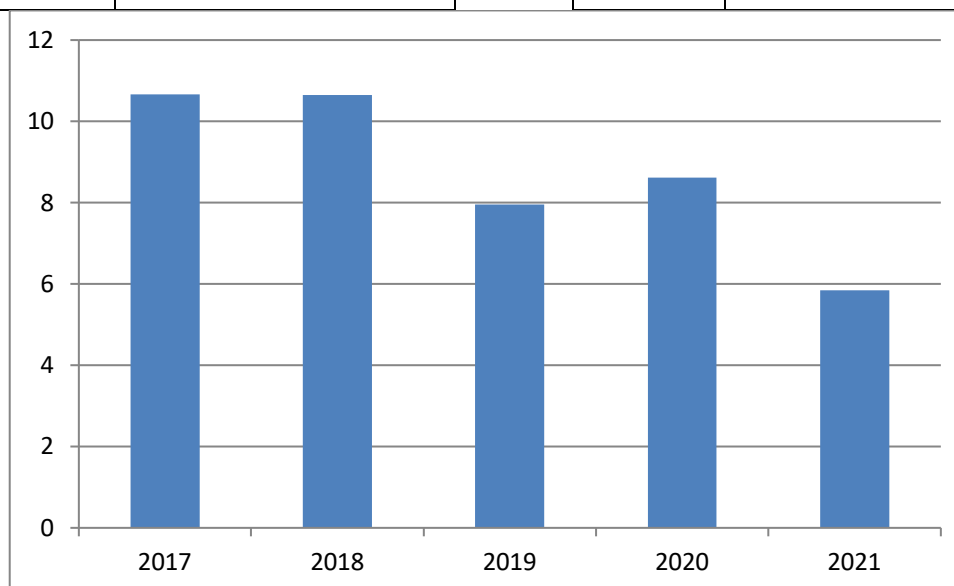


Figure 2: Permitted reserves of Sand and Gravel in Buckinghamshire (million tonnes) 2017-2021

Site Capacities

1.18. Monitoring surveys seeks from operators their maximum annual output taking account of limitations on the site such as plant size, operating hours, and lorry limits. Table 4 sets out the maximum annual output that the sites within the County could achieve. There may be several reasons as to why this has varied over the years, sites could have varied planning conditions, loss of sites as well as improved reporting of data from the operators.

Table 4: Maximum annual output in Buckinghamshire for 2016 - 2021 in tonnes per annum (tpa)

	Soft Sand output (tpa)	Sharp Sand and Gravel output (tpa)	Sand & Gravel or hoggin output (tpa)	Totals
2016	62,000	1,077,500	850,000	1,989,500
2017	476,500	1,364,279	780,000	2,620,779
2018	491,000	990,000	852,000	2,334,000
2019				
2020	83,000	1,280,400	83,000	1,446,400
2021	83,000	1,044,927	83,000	1,210,927

Imports and Exports

1.19. The National Aggregate Minerals Survey 2019, which was undertaken by the British Geological Survey (BGS), provides an assessment of regional and national sales, consumption and the transportation and movement of aggregates between MPAs and regions. The report collates data for Buckinghamshire and Milton Keynes as one “sub-region,” and indicates that in 2019 as a sub-region, 1.3mt of land won sand and gravel was consumed compared to 0.78 mt of sand and gravel during 2014. Sand and gravel consumed in the sub-region was supplied by the authorities shown in table 5.

Table 5: Percentage of Sand and Gravel consumed by Buckinghamshire and Milton Keynes in 2019 by source region.

Source region	Source sub-region	Percentage of sand and gravel consumed by Milton Keynes & Buckinghamshire
South East	Buckinghamshire	50 – 60%
	Kent	<1%
	Hampshire	<1%
	Oxfordshire	1 - 10%

	Southampton City Council	<1%
	West Sussex	<1%
East of England	Bedford	1 - 10%
	Central Bedfordshire	1 - 10%
	Cambridgeshire	10 - 20%
	Essex	1 - 10%
	Hertfordshire	1 - 10%
	Peterborough	<1%
East Midlands	Derbyshire	<1%
	Lincolnshire	1 - 10%
	Northamptonshire	1 - 10%
West Midlands	Staffordshire	1 - 10%
Total consumption		1,376,000

1.20. The Aggregate Minerals survey 2019 report demonstrates that the sub-region is an importer of primary aggregate, as it relies on imports of crushed rock as it is not a producer of crushed rock.

Table 6: Primary Aggregates Imports to Buckinghamshire and Milton Keynes 2019 (tonnes)

	Imports in Buckinghamshire and Milton Keynes
Sand and Gravel	583,000
Crushed Rock	704,000
Total	1,286,000

1.21. As Buckinghamshire has only one rail aggregate depot, data on rail-served aggregates from depots in Buckinghamshire has been amalgamated with those in Milton Keynes and Oxfordshire. During 2020 the rail aggregate depot in Buckinghamshire was active and imported aggregate via rail.

Table 7: Sales of imported Aggregate at South East England Rail Depots (000 tonnes) 2020

	Land won crushed rock			Land won sand and gravel		
	2020	10-year average	3-year average	2020	10-year average	3-year average
Berkshire, Hampshire & IoW	1,931	1,508	1,888	159	n/a	185
Buckinghamshire, MK, and Oxfordshire	900	884	982	33	n/a	20
Kent and Medway	599	501	624	384	n/a	336
Surrey, East Sussex, and West Sussex	1,007	1,104	980	61	n/a	248
Total	4,437	3,996	4,473	637	n/a	795

Source: Data taken from Table 8, South East Annual Report 2020

Secondary and Recycled Aggregates

- 1.22. Most of the known aggregate recycling in Buckinghamshire takes place at temporary facilities, often located at sand and gravel quarries, although several sites also benefit from permanent planning permissions. The unreliability and variability in gathering information relating to the movements of construction and demolition waste, and the production of recycled aggregate, are widely acknowledged by other Minerals and Waste Planning Authorities. In Buckinghamshire, information relating to facilities which manage secondary and recycled aggregates consists largely of data sourced through the annual monitoring survey.
- 1.23. Minerals returns for 2021 indicated that there were four active recycled aggregates sites producing approximately 95,000 tonnes of recycled aggregate. It also indicates that there is the annual output potential for 450,000 tonnes for recycled aggregate and secondary aggregate.

Aggregate Supply, Demand, Future Provision and Local Considerations

- 1.24. The MWLP identified an annual supply requirement of 0.81 million tonnes per annum (mtpa) in the Thames and Colne Valley primary area of focus and a further 0.12 mtpa from the Great Ouse Valley. However, the plan acknowledged that the appropriate level of annual supply may require revision, dependant on the findings of the LAA. Policy 3 refers to *“The maintenance of a landbank for sand and gravel equivalent to at least seven years supply will be sought in order to ensure a steady and adequate supply and in line with prevailing Local Aggregates Assessment.”*

1.25. The rolling average now reflects a period from 2012 – 2021, figure 4 shows the sales data for sand and gravel in Buckinghamshire for the most recent ten-year period 2012-2021 against the ten-year average sales data. This shows that the ten-year average sales figure for the past few years have been slowly increasing whilst there has been fluctuation in sales. However, apart for 2018 and 2020, there has been a continued increase in sales each year. The slower increase in the 10 year average is due to the lower sales in the early 2010's, but we are now seeing the additional years sales figure increasing and pushing the trend upwards.

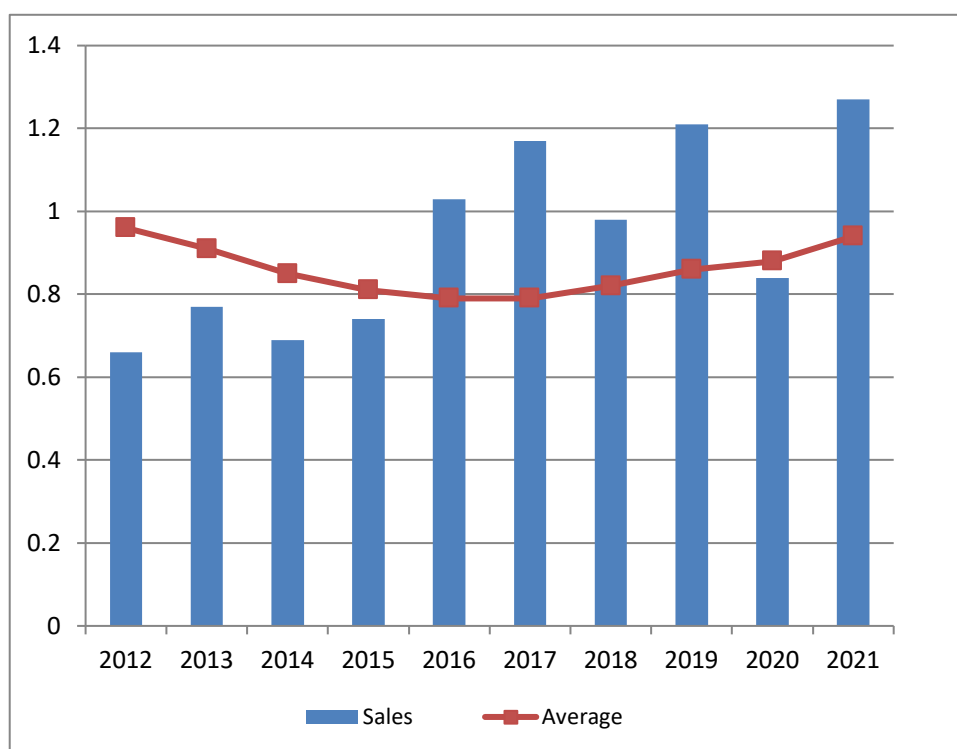


Figure 1: Comparison of past sand and gravel production with ten-year average (million tonnes) 2012- 2021

1.26. Use of sales data over the most recent ten-year period is a balanced indicator of required provision, since it includes intervals of high and low economic activity, and therefore evens out the relative peaks and troughs. However, in accordance with the NPPF, MPAs are also required to consider 3-year sales data averages as well as any “local factors” that could affect aggregate supply and demand.

1.27. Table 8 sets out calculations for the sand and gravel landbank based on different provision rates used including:

- the most recent ten-year average of sales data based on the period 2012 – 2021, and
- the average of the last three years sales data based on the period 2019 – 2021

Table 8: Sand and Gravel Landbank in Buckinghamshire as of 31/12/2021

Permitted reserves (mt) at 31/12/2021	5.85	
Rolling average of ten years sales data (mtpa)	0.94	6.2 Years Supply
Average of three years sales data (mtpa)	1.12	5.2 Years Supply

Local considerations

1.28. The former districts within the county were planning for housing growth through their new Local Plans. The local plan covering the former Wycombe District was adopted in August 2019 and the Vale of Aylesbury Local Plan (VALP) in September 2021. The Objectively Assessed Housing Need for Buckinghamshire³ has identified the need for 47,500 new homes for the period 2013-33. This would result in a significantly greater housing delivery rate than in the past. Table 9 shows housing completions from 2013 to 2020.

Table 9: Housing Completions across Buckinghamshire former Districts areas 2013 – 2020

Year beginning 1 st April	North and Central Area (Aylesbury Vale)	East Area (Chiltern)	South Area (South Bucks)	West Area (Wycombe)
2013	990	148	142	266
2014	1,420	114	139	423
2015	1,190	158	80	376
2016	1,323	247	431	788
2017	1,414	286	299	511
2018	1,758	353	328	814
2019	1,721	130	98	498
2020	1,357	147	121	357
Total	11,181	1,583	1,638	4,033

Source – (2013-2019) Former District Council's Annual Monitoring Reports (2020) [Buckinghamshire Authority Monitoring Report 2020-2021](#), data taken for April - March each year

1.29. A number of large national infrastructure schemes have started that impact the on the county. One of the biggest impacts upon the county is the HS2 rail link. The main construction works has begun within Buckinghamshire but at present there are

³ Available at: [Buckinghamshire Housing and Economic Development Needs Assessment 2016](#)

considerable uncertainties concerning its demand for construction materials, as the main works contractors have not published their mineral requirements. It is not possible to estimate the likely requirements of the HS2 project for locally arising construction materials, given the proximity of other aggregate producing MPAs to the line of the HS2 project. However, it is anticipated that there will be pressure on local reserves. There is also scope for the reuse of surplus excavation waste arising from the HS2 scheme for use in engineering works in the future, which could substitute for quarried materials.

- 1.30. Other national infrastructure schemes include the Phase 2 western section of the East West Rail (EWR) project (Bicester/Aylesbury to Bletchley/Bedford). Its requirement for aggregate is believed to be much less than that of HS2, and indications are that it may not be sourced entirely, or at all, from within Buckinghamshire. It will be a commercial decision as to where its contractors source construction materials at the time of any construction works taking place.
- 1.31. Previous major infrastructure projects that were considered includes Heathrow Airport Expansion, but pre application work seems to have stalled. Should the project restart, the consultation undertaken by Heathrow Airport Limited in June 2019 set out its expectation that material will be brought to site via rail. In addition, an area in South Buckinghamshire has been identified within their red line boundary as a borrow pit to supply the construction of the expansion. This means that it is unlikely that the scheme will have additional need for resource from Buckinghamshire. The proposed Oxford to Cambridge Expressway link between the M40 and the M1 is no longer progressing as a project.
- 1.32. Locally the Aylesbury Link Roads, other road schemes and various flood mitigation schemes would require aggregates but would probably not be significant in the context of previous such developments.
- 1.33. The expectation for the level of future demand for aggregates is therefore highly mixed, with potentially significant demand anticipated from infrastructure schemes and housing growth. Sales have continued to grow in the past 5 years showing an upward trend in the 10-year sales average. This would imply that additional resource has been needed by the markets. There are applications for additional reserves from an allocated site and for windfall extraction to prevent sterilisation being considered meaning there is some potential additional reserves in the short term.