JOINT ANNUAL LOCAL AGGREGATE ASSESSMENT 2019

Greater Manchester, Merseyside and Halton, and Warrington

(Data for the period 1 January to 31 December 2018)

August 2020

Prepared on behalf of the following Mineral Planning Authorities:

Greater Manchester *(including Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan)*

Merseyside and Halton *(including Knowsley, Liverpool, Sefton, St Helens and Wirral)*

Warrington Borough Council

Executive Summary

General

National Planning Policy Framework requires mineral planning authorities to plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment (LAA). The LAA should be based on a rolling average of 10 years sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources). Furthermore, the LAA should conclude if there is a shortage or a surplus of supply and, if the former, how this is being addressed.

National Planning Practice Guidance explains that mineral planning authorities should also look at average sales over the last 3 years in particular, to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply.

The Minerals Planning Authorities of Greater Manchester, Merseyside and Warrington (17 unitary local authorities) have worked together to produce a series of joint LAAs, reflecting their status as a single aggregate apportionment sub-region under the Managed Aggregate Supply System (MASS[1]). This is the 7th LAA to be produced in that way and covers aggregate supply in the sub-region in the year 2018.

Sand and Gravel

The sub-region had one operational quarry during 2018. The total sales figure for land-won sand and gravel in the sub-region for 2018 has been presented as a 3-year average for commercial confidentiality reasons. The most recent 3-year average sales figure is 0.26 million tonnes (Mt) (average 2016-2018) with the 10-year average figure for sand and gravel is 0.27mt (rolling average 2009-2018).

Sales do not match consumption levels from for materials required to service Greater Manchester, Merseyside, Halton and Warrington. Consumption rates continue to be significantly higher, placing a greater demand on imports to meet the needs of the sub-region.

Sales also fall below the land-won apportionment for the LAA sub-region of 0.43mt. However, when land-won sand and gravel sales are combined with the total marine won sand and gravel in 2018 of 0.26mt, the LAA sub-region surpassed its allocated apportionment requirement for the period.

Total reserves of sand and gravel were 1.2 million tonnes at the end of 2018. This would be below the national landbank requirement forming a total of 4.4 years of sales based on the average sales over the most recent 10-year period.

Crushed Rock

There were 9 active crushed rock aggregate quarries in the sub-region during 2018. In total, 0.65mt of crushed rock were sold from these quarries in 2018, down from 0.78mt in 2017 and back at similar levels sold in 2014.

[1] Guidance on the Managed Aggregate Supply System, DCLG October 2012. MASS is a process which looks at the demand and supply of aggregates in England and requires regions, such as the NW, to contribute to meeting this need. The system accounts for the ability of areas to provide aggregates and apportions the requirements out across the historic regional groupings of England.

The most recent 3-year average sales were 0.77mt (average 2016-2018) and the 10-year average sales were 0.60mt (rolling average 2009-2018). Sales in 2018 were above the 10-year average but just below the 3-year average sales.

Total reserves of crushed rock were 17.50 million tonnes at the end of 2018. This would provide for a total of 29.16 years of sales based on the average sales over the most recent 10-year period.

Marine Aggregates

The sub-region is an important landing point for marine-won sand and gravel from the licensed dredging areas offshore and its wharves also handle significant shipments of crushed rock from quarries elsewhere in the UK. The offshore dredging areas currently operate well within their licensed extraction limits and this has always been the case. In recent years, the process to obtain a production licence has been simplified and the time taken reduced by over a third, which should instigate further interest in the area. There is currently one application pending a decision in the area, which would release an additional 0.5mt of reserve. Crown Estates has advised that as market demand is increasing, it would be possible to increase supply should market growth continue, and it is understood that a dedicated dredger is now deployed in Liverpool Bay. It is hoped that with depleting land won sand reserves, marine supply could be increased in the short to medium term to meet this need.

In 2018, 0.28mt of material was removed from permitted dredging areas of the North West coast, with 281,839 tonnes landed at permitted landing points in the North West of which 258,070 tonnes landed in Liverpool.

Future Provision

The general trend has been one of declining reserves within the sub-region, due in large part to the heavily urban nature of the area and the lack of workable aggregate resources within it.

Although the sub-region remains compliant with its land-bank obligations for crushed rock, the land bank for sand and gravel remains below 7 years for the second year running. Without any new permissions coming forward, this position will remain the same.

There is no easy solution to increasing the sales of both crushed rock and sand and gravel to match the consumption levels required to service Greater Manchester, Merseyside, Halton and Warrington; this is a predominantly urban sub-region, with little scope to expand existing quarries or to initiate new ones. Aggregates imported from elsewhere will likely continue to be important in terms of meeting demand within the sub-region, as such, it is important to acknowledge the need to continue to engage in duty to cooperate discussions with those MPAs from which aggregates are being imported. It should be noted that there is also recognition at a wider strategic level within the sub-region of the important link between minerals and growth.

There is also recognition of the importance of identifying alternative sources of aggregates in order to reduce the amounts of primary aggregate required. There is an important market for recycled and secondary aggregates within the LAA area and it is hoped that this will increase to form a larger part of the sub-region's required aggregate supply in the coming years. This is also true of marine won aggregates, which the sub-region is perfectly placed to benefit from when, as is hoped, more material is landed from the Irish Sea.

Table 1 – Executive Summary for 2019 LAA

2019 LAA Summary Figures									
Aggregate	**2018 Sales (Mt)**	**Average (10 year) Sales (Mt)**	**Average (3 year) Sales**	**Trend (compared to 2018)**	**LAA Rate (Mt)**	**Reserve (Mt)**	**Landbank (Years)**	**Capacity (Mtpa)**	**Comments**
Land won Sand & Gravel	c.0.27	0.27	0.26	-	0.3	c.1.2	4.4	Not Known	Two quarries contributed to sales in 2017 and one quarry had permitted reserves. The 2018 sales figure is confidential. The landbank is based on permitted time remaining at the only quarry which still has permitted reserves. Majority of demand is met through imports.
Crushed Rock	0.65	0.60	0.77		0.85	17.5	20.6	Not Known	Low quality aggregate serving local markets, reducing need to import this material. Higher quality crushed rock continues to be met through imports with consumption higher than demand.
Recycled / Secondary Aggregates									Total produced - 3,929,004 tonnes Total handled - 5,082,405 tonnes
Marine Sand and Gravel									North West Market Study expected soon.
Conclusion	Overall, it is expected that the supply of land-won aggregate is likely to decline in future unless new permissions are granted. The reserve of sand and gravel represents a landbank of fewer than 4 years based on the LAA rate. It is anticipated that the demand for aggregates will continue to increase and therefore imports of material from other areas will continue to play a vital role in supporting built development and infrastructure. Given the extent of the urban area and the quality of indigenous aggregates, this situation is unlikely to change in the future. However, it is also anticipated that the supply of marine aggregates will increase due to deployment of a dedicated dredger in Liverpool Bay which will may reduce the amount of materials imported into the sub-region.								

CONTENTS

1. INTRODUCTION 7
2. SUB REGION GEOLOGY 15
3. DEMAND 21
4. SUPPLY 33
5. OPPORTUNITIES AND CONSTRAINTS 46
6. KEY MESSAGES, CROSS-BOUNDARY LIAISON AND FUTURE REVIEW 50
7. APPENDIX A 54
8. APPENDIX B – DUTY TO COOPERATE 60
9. GLOSSARY 79

1. Introduction

Local Aggregates Assessment Background

1.1. The National Planning Policy Framework (NPPF), includes a requirement for Mineral Planning Authorities (MPAs) to plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment (LAA). This should be based on a rolling average of 10 years sales data, and other relevant local information, and an assessment of all of the supply options (including marine dredged, secondary and recycled sources)[2]. The guidelines specify that this can be done either individually or jointly by agreement with one or more mineral planning authorities. National Planning Practice Guidance (NPPG) states that MPAs should also look at average sales over the last three years, to identify the general trend of demand, as part of the consideration of whether it might be appropriate to increase supply[3].

1.2. In May 2017, The Planning Officers Society and Minerals Products Association provided the latest version of the living document, 'Practice Guidance on the Production and use of Local Aggregate Assessments', which seeks not to duplicate the advice in The Planning Practice Guidance (PPG) but to build on it, drawing on best practice since LAAs were introduced.

1.3. The PPG advises that an LAA should contain three elements:

- A forecast of demand for aggregates based on both the rolling average of 10 years sales data and other relevant local information.
- An analysis of all aggregate supply options as indicated by landbanks, plan allocations and capacity data.
- An assessment of the balance between demand and supply.

Production of a Joint LAA

1.4. The Association of Greater Manchester Authorities (AGMA), the Merseyside Authorities, including Halton (working through Merseyside Environmental Advisory Service (MEAS)) and the unitary authority of Warrington (together known as the 'sub-region'), have decided to continue to work together by collaborating in the production of this document in order to satisfy the duty to co-operate imposed by Section 110 of the Localism Act and due to established links from previous

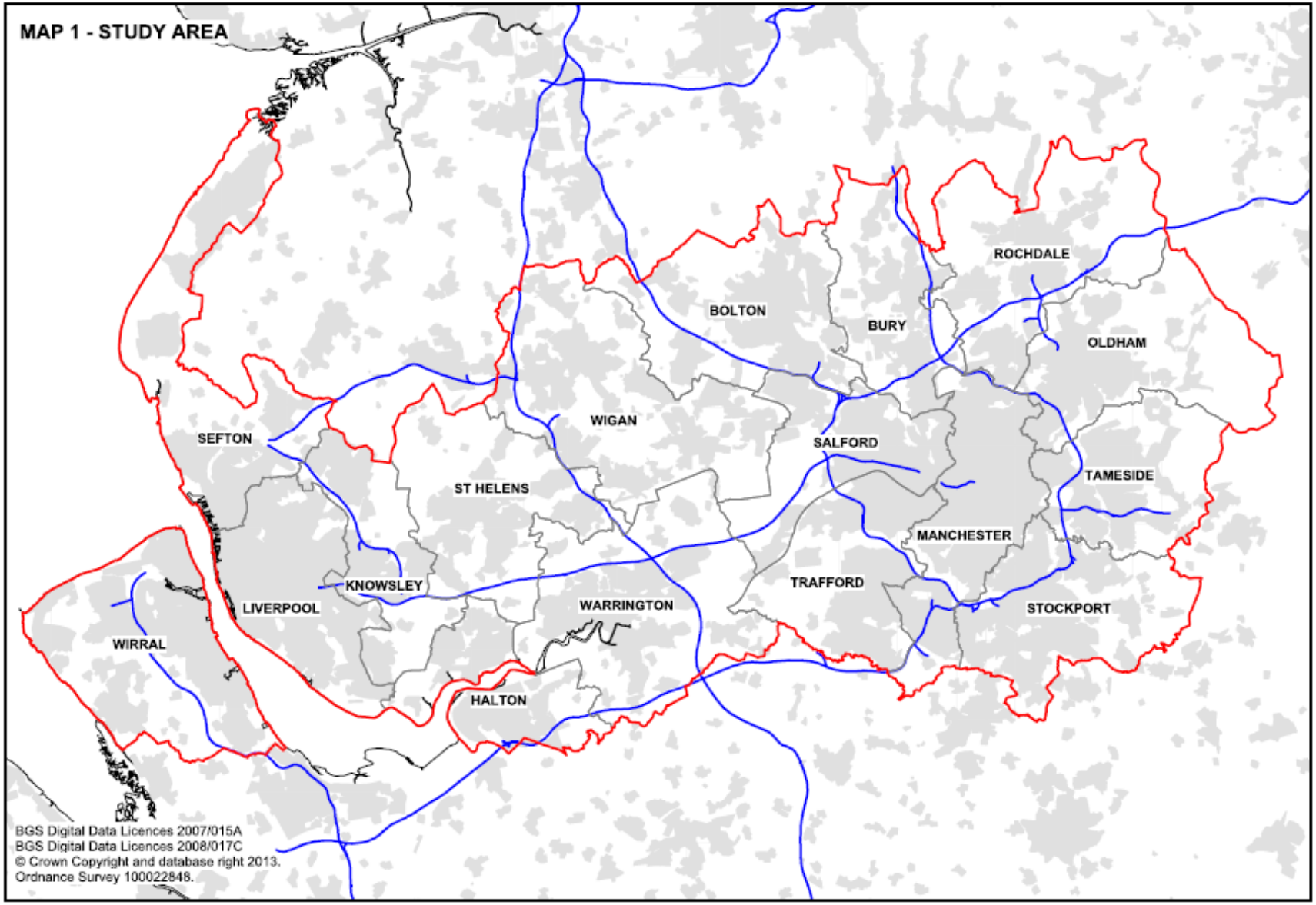
[2] Paragraph 207, NPPF (2019)
[3] NPPG – paragraph 064, Reference ID: 27-064-20140306

sub-regional working under the AWP apportionment as part of MASS. The data available for the Greater Manchester and Merseyside (including Halton) Authorities and Warrington to produce the LAA is only available at this sub-regional level and cannot, for reasons of commercial confidentiality, be disaggregated to an individual authority level.

1.5. This LAA provides an assessment of the demand for, and supply of, aggregates in the sub-region based on an average of both 3-year and 10-year sales data, as well as other relevant local information and an assessment of all supply options. The LAA is a fact-based monitoring document that will act as an evidence base to assist the individual Mineral Planning Authorities (MPAs) in their policy formulation. A summary of the key messages for individual MPAs can be found in Section 12.

Study Area

1.6. The study area covers the ten Metropolitan Districts of Greater Manchester; the five Metropolitan Districts of Merseyside and the Unitary Authorities of Halton and Warrington. These are detailed on Map 1 below and summary statements of the components of the study area are also provided.


MAP 1 - STUDY AREA
ROCHDALE
BOLTON
BURY
OLDHAM
WIGAN
SEFTON
SALFORD
TAMESIDE
ST HELENS
MANCHESTER
KNOWSLEY
TRAFFORD
LIVERPOOL
WARRINGTON
STOCKPORT
WIRRAL
HALTON
BGS Digital Data Licences 2007/015A
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Ordnance Survey 100022848.

Greater Manchester

1.7. Greater Manchester is the third largest conurbation in the UK with a population of over 2.8 million. Much of the land is urban; however, there are large rural areas, especially in the north, which is where mineral working tends to occur. Greater Manchester is bounded by Lancashire, West Yorkshire, Derbyshire, Cheshire East, Warrington and Merseyside and is a major transport hub. The M60 motorway encircles the conurbation, with major road links leading from it. Greater Manchester relies on imports of high specification aggregates from quarries in North Wales, Derbyshire, Lancashire, Cumbria, Staffordshire and Cheshire. Significant quantities of materials are transported by road and rail, with a number of key rail depots located within the sub-region. The Cemex site in Salford in particular, imports on average around 650,000 tonnes per annum by rail. Greater Manchester is heavily reliant upon the importation of minerals from the Peak District National Park.

1.8. The natural landscape is very important for biodiversity, and it contains a wide variety of habitats including ancient woodlands, moorlands, mosses, broadleaf woodland, rivers and ponds, and bogs. Consequently, several sites within Greater Manchester have been designated for their biological, cultural, archaeological and heritage importance.

Merseyside and Halton

1.9. Merseyside and Halton is a coastal conurbation strongly influenced by the River Mersey and its estuary. Although highly urbanised with a population of approximately 1.5 million, between 33% and 50% of each of the constituent unitary local authorities is designated Green Belt and contains a high proportion of high-quality agricultural land, which remains economically significant. There has been extensive working of minerals in the area in the past, but the limited nature of the remaining resources and presence of significant spatial and environmental constraints has led to a significant decline in the number of working sites and their production in recent years.

1.10. Merseyside and Halton is bounded by Lancashire, Cheshire, Warrington, Greater Manchester and North Wales and has major road links through the M6, M62, M58, M53 and M56. Like Greater Manchester, Merseyside and Halton rely on imports of high specification aggregates from quarries in North Wales, Derbyshire, Lancashire, Cumbria, Staffordshire and Cheshire, as well as those transiting the area's port facilities. Materials are transported by sea, road and rail.

1.11. The Merseyside and Halton economy has a strong maritime focus with significant port facilities through which aggregate minerals are imported and processed for onward transport to the point

of use. These include sand and gravel from off-shore dredging in the Irish Sea and crushed rock materials shipped from other land-won sources, notably the Glensanda quarry in the west of Scotland.

1.12. The environment of Merseyside and Halton is highly sensitive and large areas, in particular, the coast and estuaries of the Mersey, Dee and Ribble, have protected status at international and national level due to their high value for a range of important habitats and species. The City of Liverpool also contains a World Heritage Site recognising the historic, cultural and architectural value of the maritime quarter of the city centre and docks.

Warrington

1.13. Warrington Borough is the most northerly of the local authorities in the former Cheshire area. It shares boundaries with Halton, Cheshire West and Chester, Cheshire East and the four metropolitan Boroughs of St Helens, Wigan, Salford and Trafford. The Borough covers some 176 square kilometres and has a population of just under 209,000.

1.14. Warrington lies at the hub of the region's communications network. The M6, M56 and M62 motorways intersect within the Borough, providing good access to all parts of the region and beyond. Warrington also lies on the region's main North-South (West Coast Main Line) and East-West (Trans-Pennine) rail routes. Two significant waterways pass through the middle of the Borough; the River Mersey, which passes close to the Town Centre and, further south, the Manchester Ship Canal. The Manchester Ship Canal is an important commercial waterway linking the Port of Manchester with the Mersey and also plays a vital role in managing fluvial flood risk along the Mersey, significantly reducing the incidence of flooding from fluvial flows.

1.15. The Mersey Valley Corridor constitutes a wide tract of land (exceeding 2kms in places) extending across the Borough from Fiddlers Ferry Power Station in the west, to Hollins Green and the flood plain of the River Bollin in the east. Its value lies in the mix of river valley habitats, notably wetlands, in the context of the Mersey Estuary as a whole - one of the largest estuaries in Europe and supporting internationally important numbers of birds.

1.16. Warrington also has extensive areas of high-grade agricultural land, a varied landscape character, and important areas of nature conservation value mostly within the relatively narrow gaps of open land separating Warrington from neighbouring towns and smaller settlements within and beyond the Borough.

1.17. Due to its largely urban nature the major transport infrastructure that dissects the Borough and the ecological habitat along the Mersey Valley Corridor, mineral activity in Warrington is limited. Consequently, the Borough relies on imports of aggregates in the same way as the other areas in the sub-region. In Warrington's case, materials are mainly transported by road.

Status of Mineral Planning in the Study Area

Greater Manchester

1.18. The Greater Manchester Joint Minerals Plan (GMJMP) was adopted by the 10 Authorities of Greater Manchester on 26 April 2013. The current Minerals Plan seeks to deliver the apportionment only and does not look at the import of minerals to meet the growth agenda. An internal review of the Minerals Plan has been undertaken as the most recent version of the Plan was published 5 years previously. This has identified several policy areas which will need to be updated to ensure the plan is in line with the updated NPPF. Current uncertainty around the progress of the Greater Manchester Spatial Framework (GMSF) has caused delays in updating the GMJMP. Meetings with GMCA representatives are due to take place in early 2021 with a view to discussing when the GMJMP can be updated.

1.19. Full details on the timetable for the GMSF can be found on the Greater Manchester Combined Authority website[4].

1.20. Planning for minerals across Greater Manchester will continue to be through the Greater Manchester Minerals Plan, with annual monitoring and the Local Aggregates Assessment informing the need or not for a review. The adoption of the GMSF may result in a requirement to undertake a review of the Minerals Plan.

Merseyside and Halton

1.21. The six authorities are each independently considering minerals matters within their broader Local Plans. There are no plans to produce a common plan or separate Minerals Local Plans within each authority. However, specific policies for minerals planning issues will be included within local plan documents as appropriate, and all of the authorities intend to continue to work within the Managed Aggregate Supply System and to participate in the NW Aggregates Working Party. Merseyside and Halton authorities will prepare their plan coverage in full compliance with the requirements of Duty to Co-operate. A summary of progress is provided below.

[4] https://greatermanchester-ca.gov.uk/what-we-do/housing/greater-manchester-spatial-framework/

1.22. The Liverpool City Region (LCR) now has a Combined Authority and an elected Mayor. The LCR is currently in the process of preparing a Strategic Framework and undertook non-regulatory public engagement Autumn/Winter 2019/20 with Regulation 7 public participation anticipated in 2021. It is hoped that the important link between minerals and the growth of the City will be recognised.

1.23. Halton's Core Strategy Local Plan was adopted in April 2013. The Council published the Proposed Submission Draft of its new Local Plan, the Delivery and Allocations Local Plan (incorporating revised Core Strategy Policies) for an eight-week consultation from 25th July 2019 to the 19th September 2019. This was the final round of consultation prior to it being submitted to the Secretary of State for examination. The Local Plan will contain policy on minerals safeguarding and extraction but no separate Minerals Local Plan.

1.24. Knowsley's Core Strategy Local Plan was adopted January 2016.

1.25. Liverpool Local Plan was submitted under Regulation 22 in May 2018 and is currently under examination. As of October 2019, the examination hearings have not yet been scheduled. The Local Plan will contain some policies on mineral safeguarding and extraction but no separate Minerals Local Plan.

1.26. Sefton's Core Strategy Local Plan was adopted in April 2017. It includes detailed minerals policies.

1.27. St Helen's Core Strategy Local Plan was adopted in October 2012. The St Helens Borough Local Plan 2020-2035 Submission Draft was the subject of consultation from 17th January 2019 until 13th May 2019. The Borough Local Plan was due to be submitted to government for examination in autumn 2019. Adoption is anticipated in 2020. The plan will include detailed minerals policies but there is no separate Minerals Local Plan.

1.28. The Wirral's Core Strategy Local Plan Proposed Submission Draft was published or consultation on 27th January 2020 for 8 weeks until 23rd March 2020 with submission for examination following later in 2020. This includes overarching minerals policy. There will be no separate Minerals Local Plan.

Warrington

1.29. Following consultation on the Draft Local Plan (Proposed Submission Version) in 2019, the Council is in the process of carrying out additional work in response to public representations.

The Draft Local Plan identifies Mineral Safeguarding Areas (MSAs) for the main mineral resources that are present in the Borough, principally sand and gravel and sandstone. It will also seek to safeguard a shallow coal deposit and the clay workings near Rixton. In addition to safeguarding mineral resources which may be of economic importance, it is proposed to safeguard existing, planned and potential minerals infrastructure such as rail heads, wharfs, concrete batching sites, and permanent facilities for the processing and distribution of substitute, recycled and secondary aggregate material.

1.30. The Draft Local Plan will also aim to direct minerals development to places where there are opportunities to restore land beneficially, avoiding places with a sensitive natural or built environment or that are close to existing communities. These will be places that are accessible by sustainable modes of transport and close to both the existing highway network and the end user. The new plan is not likely to be adopted until spring 2022.

2. Sub Region Geology

Context

2.1. The oldest rocks in the sub-region are of Carboniferous age and can be found at the far eastern and northern upland fringes of Greater Manchester, where they outcrop. They comprise sequences of mainly coarse-grained sandstones and gritstones.

2.2. The upland areas give way to progressively younger rocks to the south and west. At first these are represented by the Carboniferous Pennine Coal Measures. Comprising sequences of mainly coarse-grained sandstones and gritstones, these are the oldest rocks in Merseyside where they are found in the northeast, primarily in St Helens. They are found in a thick band across Greater Manchester and at the north western tip of Warrington.

2.3. The Pennine Coal Measures give way to progressively younger, Permo-Triassic rocks to the south and west of the sub-region. These cover much of Merseyside and Warrington.

2.4. Extensive areas of the sub-region are covered with superficial drift deposits of Pleistocene to recent age. These are dominated by glacial tills ('boulder clay') laid down by retreating ice sheets at the end of the Devensian cold stage some 10,000 years ago. The tills typically comprise silty clays with subordinate sands and gravels (ranging in size up to large boulders). The latest drift deposits are represented by tidal sands, river terrace sands and gravels, glacio-fluvial and glacio-lacustrine sands and gravels, alluvium and windblown sand, and peat.

Overview of Aggregate Resources in Sub-Region

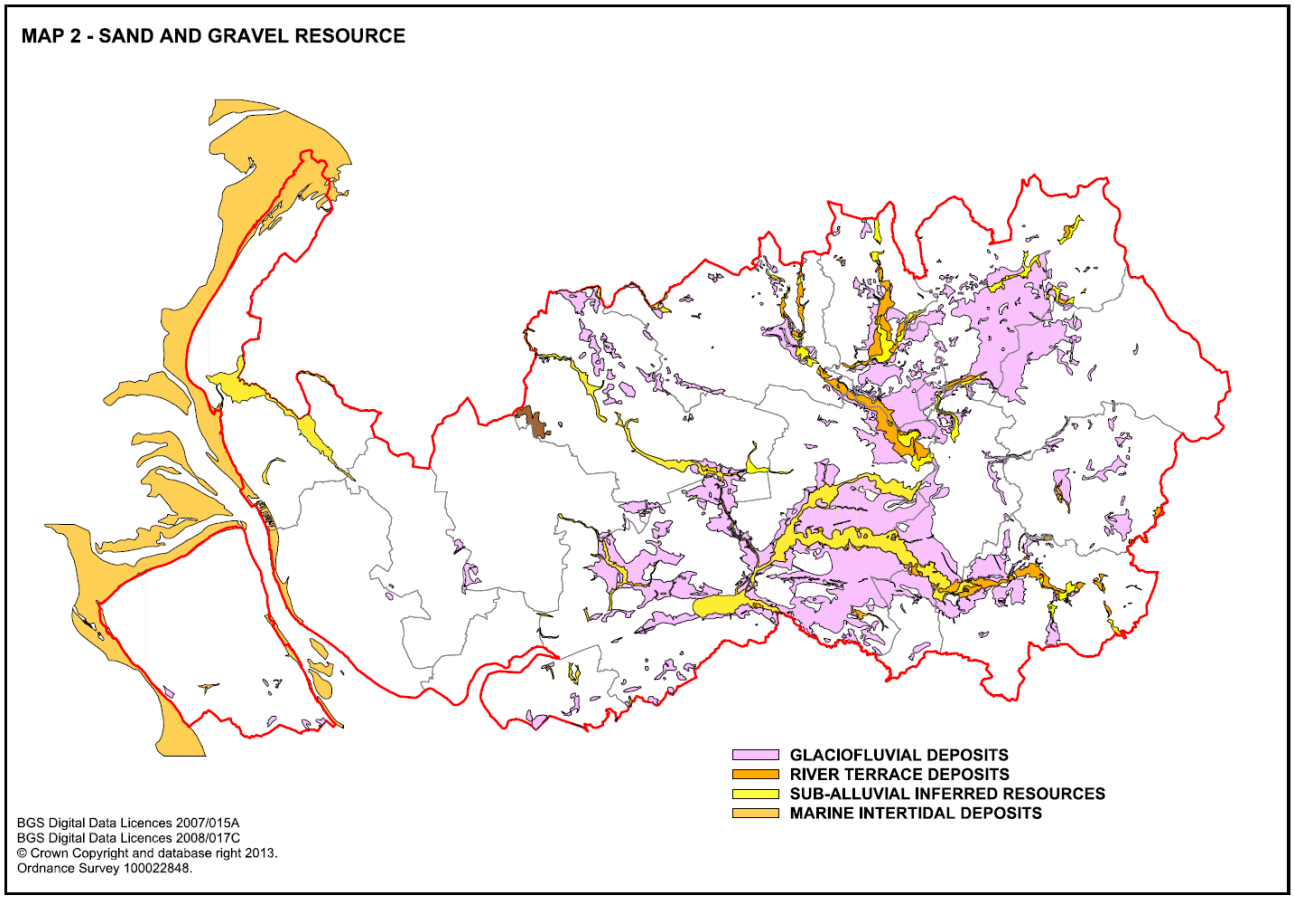
Table 2-1: Summary of Sub-Regional Aggregate Mineral Resources

Mineral Resource	Summary of Mineral Resource	Example uses of material
Glaciofluvial sand and gravel	Sands and gravels are derived from the erosion of local bedrock by the action of ice, which is then deposited by glacial melt water. Sand and gravel is defined on the basis of particle size rather than composition, although they are usually rich in silica (quartz, quartzine and flint), but other rock types occur.	Domestic uses, e.g. garden. Building projects, e.g. concrete or mortar. Road building/repair, e.g. asphalt.
Carboniferous Millstone Grit (sandstone)	Carboniferous sandstones consist of sand-sized particles with minor pebbles, composed dominantly of quartz, but also with some feldspar, some of which are cemented by carbonaceous material and other with Kaolinitic materials. The sandstones are typically buff coloured, although locally grey, and vary from fine to coarse grained.	Dimension stone. Crushed rock fines. Bulk fill material.

Triassic (Sherwood) Sandstone	The Sherwood Sandstone Group, formerly known as the Bunter Sandstone, predominantly comprises sandstone and pebbly sandstone with lesser amounts of conglomerate and minor amounts of mudstone and siltstone. It was deposited between 230 and 260 million years ago in the late Permian and Triassic periods.	Dimension stone. Crushed rock. Bulk fill material.

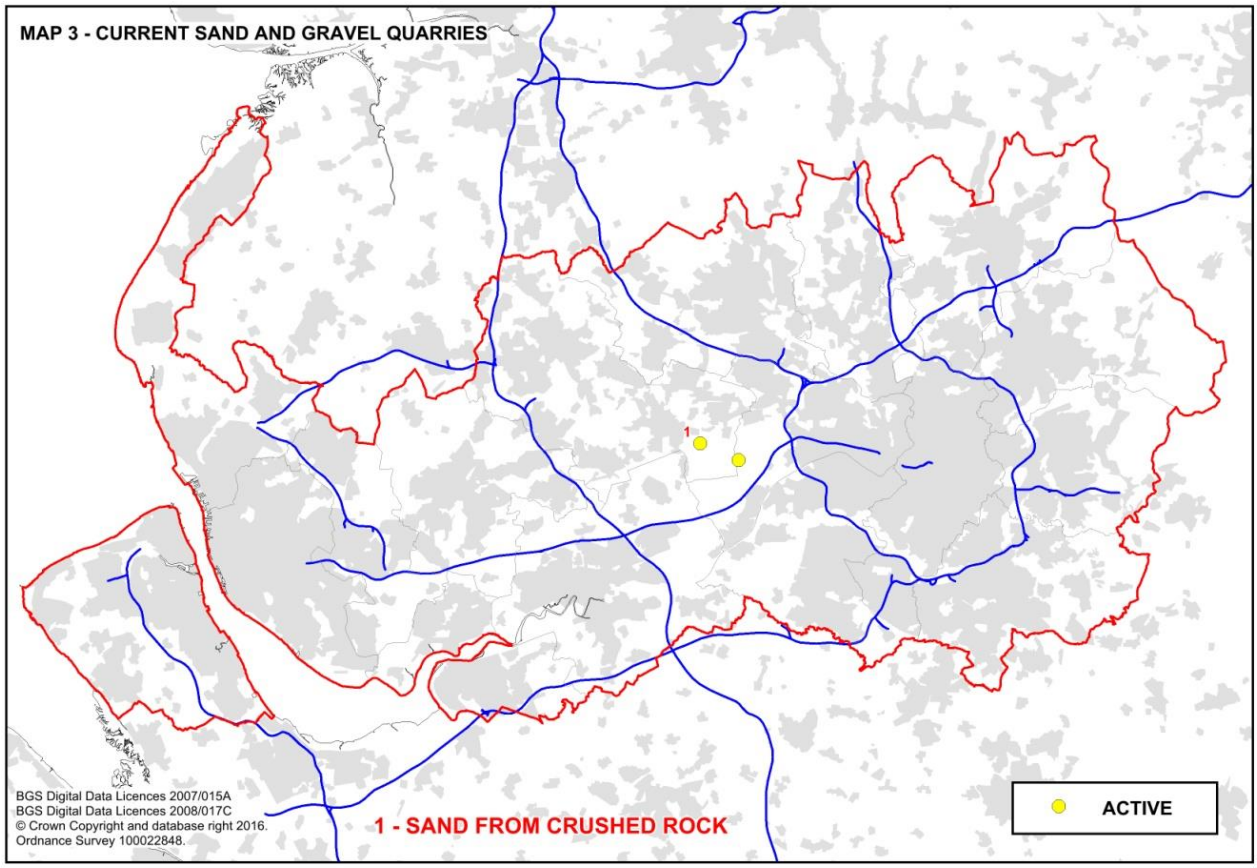
Sand and gravel resources and current extraction

2.5. Resources of sand and gravel primarily occur within superficial or 'drift' deposits of glacial and post glacial origin. These sands and gravels are derived from the erosion of local bedrock in a variety of environments, including glaciofluvial rivers formed from melting ice and also river terraces formed after the main ice had retreated from the area. **Map 2** shows the distribution of the sand and gravel resource across the sub-region.



2.6. Morley's Hall quarry is now inactive and out of reserves, and, as a result, there is now only one operational sand and gravel quarry in the sub-region. Sand and gravel has been extracted in the past in Warrington although there are no working quarries at present. Nevertheless, there are quite extensive areas of mineral resource across the borough and the Council's Regulation

18 consultation Document (Preferred Development Option) proposes safeguarding areas for sand and gravel and coal. Activity in Merseyside is mainly limited to the landing of marine-dredged material at coastal ports such as the Port of Liverpool and Garston. The Sefton Local Plan includes a safeguarding area proposed for the alluvial sand and gravel of the Alt floodplain, though this potential resource has not been of recent commercial interest and is often constrained by built development. In Greater Manchester, glacio-fluvial sand and gravel is

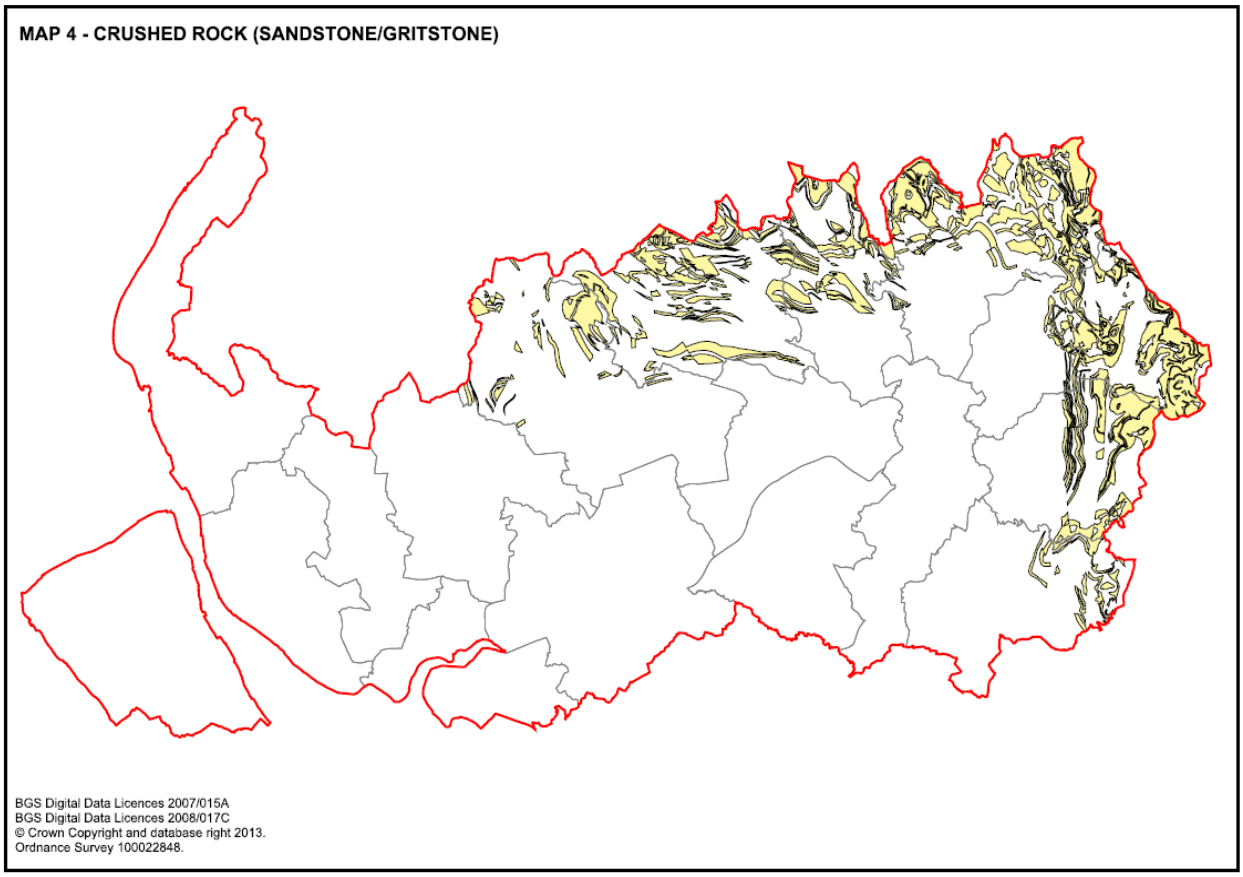


currently worked at Astley Moss. Morley's Hall Quarry in Wigan did produce sand, but this was worked from soft sandstone (Triassic sandstones of the Sherwood Sandstone Group) rather than from sand and gravel deposits. As mentioned above, Morley's Hall Quarry is currently inactive and the permission end date on site is in December 2022.

Crushed rock resources and current extraction

2.7. Crushed rock resources are associated with Carboniferous and Permo-Triassic rocks of the area (see Map 4).

2.8. Extraction of crushed rock aggregate in Greater Manchester is confined to a broad strip running north-south along the eastern margin and east-west along the northern margin. There are five crushed rock aggregate quarries in Greater Manchester which are concentrated in the north and east of the sub-region. Four of the five quarries are currently active for the production of aggregates; the other is inactive and did not produce any aggregate during 2018.



2.9. The only aggregate producing quarry in Warrington is operated by Gaskell Brothers Ltd for the extraction of sandstone at Southworth Quarry in Croft Parish. The site produces crushed rock aggregate primarily for bulk fill purposes. Planning permission for this operation is valid until 2025. The site also contains a significant aggregate recycling facility and the quarry void is being backfilled with inert wastes.

2.10. There is one quarry in Merseyside with an active planning consent for production of crushed rock aggregate; Bold Heath in St Helens. It produces low grade crushed sandstone for use as construction fill and should continue to contribute to apportionments until 2024. British Geological Survey (BGS) explain that isolated mineral workings may occur in areas that are shown as having

no mineral resource. This explains why there are crushed rock quarries identified in Map 5 which do not correspond with the sandstone/gritstone resource identified in Map 4.

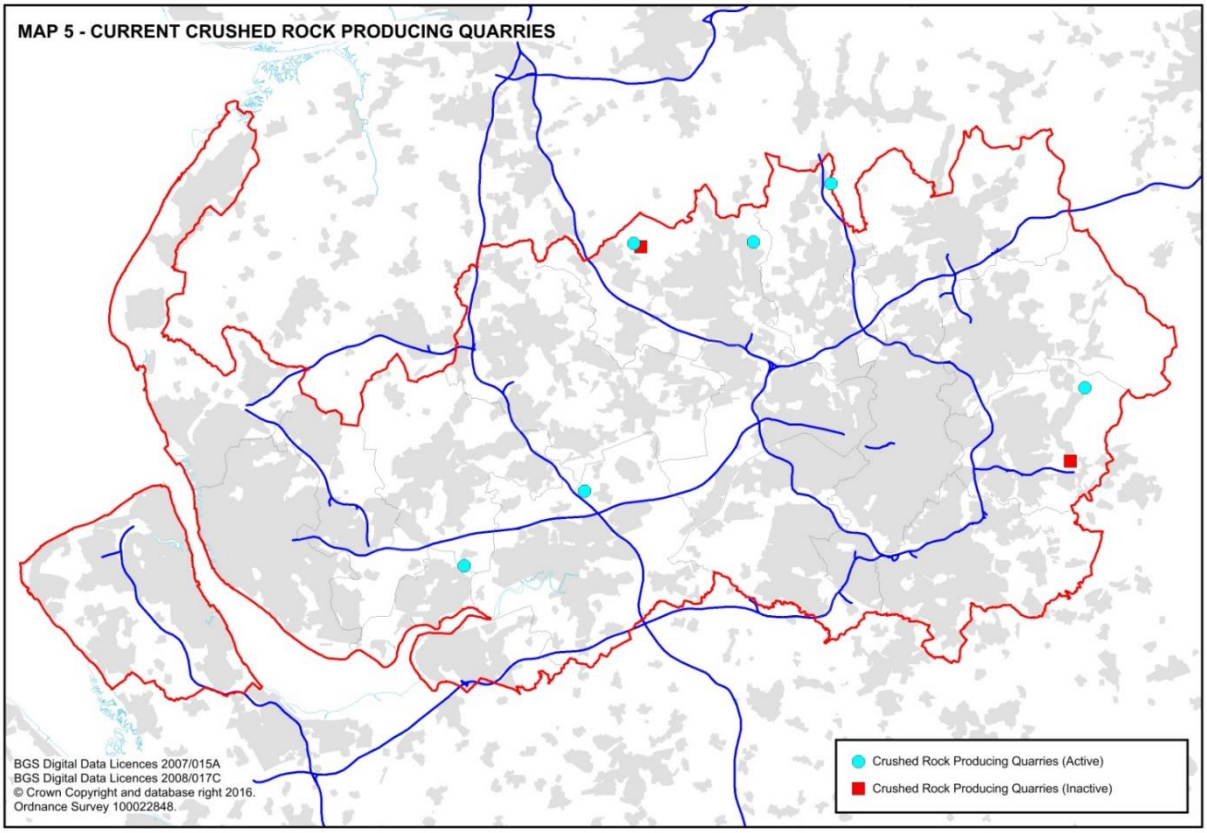


Table 2-2: Permitted Aggregate Quarries in the Sub-Region

Site name	Map Ref	Operator	Grid Ref	Mineral	Status	MPA	Permission End Date
Astley Moss	2-A	Breedon Aggregates	SJ 371 500	Sand and gravel	Active	Salford City Council	31.12.2022
Bold Heath Quarry	5-BH	D Morgan Plc	SJ 530 885	Sandstone	Active	St Helens Council	29.08.2024
Buckton Vale Quarry	5-B	W Maher & Sons Ltd	SD 992 016	Sandstone	Active	Tameside Council	31.12.2020
Fletcher Bank Quarry	5-F	Marshalls Mono Ltd	SD 804 170	Sandstone	Active	Bury Council	31.12.2036
Harrop Edge Quarry	5-HE	Chartrange (Quarry Products)	SJ 982 959	Sandstone	Inactive	Tameside Council	2042
Harwood Quarry	5-H	Booth Ventures	SD 747 124	Sandstone	Active	Bolton Council	31.12.2026
Montcliffe Quarry	5-M	Armstrongs	SD 656 124	Sandstone	Active	Bolton Council	21.02.2033
Morleys Hall Quarry	2-M	Casey	SJ 685 990	Sand and gravel	Inactive	Wigan Council	31.12.2022 Note: no permitted reserves remain
Offerton Quarry	-	Offerton sand and gravel	SJ 928 893	Sand and gravel	Closed[5]	Stockport Council	Closed
Pilkington Quarry	5-P	Armstrongs	SD 622 121	Sandstone	Inactive	Bolton Council	31.12.2026
Southworth Quarry	5-S	Gaskell Bros	SJ 619 940	Sandstone	Active	Warrington	31.12.2025

[5] Active for recycled aggregates

3. Demand

Aggregate Sales / Reserves

Land-won Sand and Gravel - Sales

3.1. Sales of land-won sand and gravel originating in the sub-region from 2009 to 2018 are shown in Figure 3-1 and Table 3-1.

3.2. The total sales of land-won sand and gravel over the monitoring period was 0.26mt. This is similar to the figure for 2017. Demand for this material has remained constant and need for the material is currently met through imports into Greater Manchester, Warrington and Merseyside and Halton, with consumption rates exceeding local supply. In addition, with planned growth across Greater Manchester in particular as detailed in the GMSF, demand for sand and gravel is expected to increase. However, it is unclear as to what role local supply will make in meeting this need, especially with existing reserves almost depleted. Details of consumption rates are only available for 2014, however MHCLG are currently undertaking an update to the survey with the results expected in 2021.

3.3. At present, Astley Moss is the only operational sand and gravel site within the sub-region. Due to the commercial confidentiality where there is only one operational site, the sales figures for aggregate land-won sand and gravel in 2016, 2017 and 2018, have been based on 3-year averages. It is acknowledged that this approach is not ideal, and concerns have been raised through the Aggregate Working Party and Duty to Cooperate discussions. However, in lieu of any other sites producing sales figures for sand and gravel, there is seemingly no other suitable alternative approach. The sub-region will commit to continuing engagement with the other MPAs in the North West and beyond in order to identify whether there are any other more suitable approaches that could be employed in future iterations of the LAA.

Figure 3-1: Land won sand and gravel sales in the sub region, 2009 – 2018 (million tonnes)

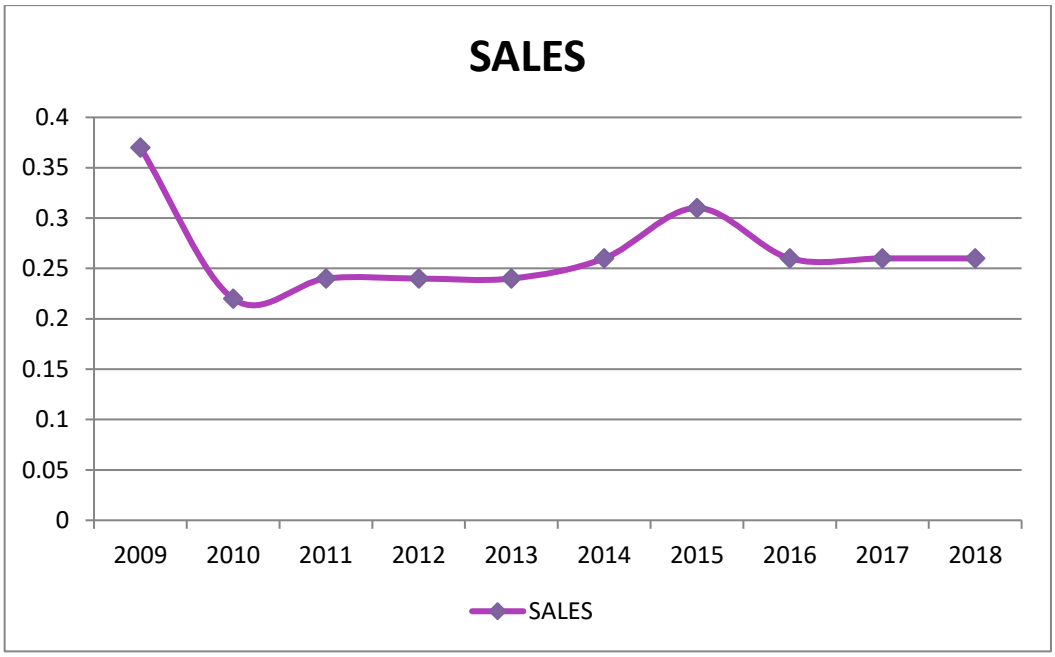


Table 3-1: Land won sand and gravel sales in the sub region, 2009 – 2018 (million tonnes)

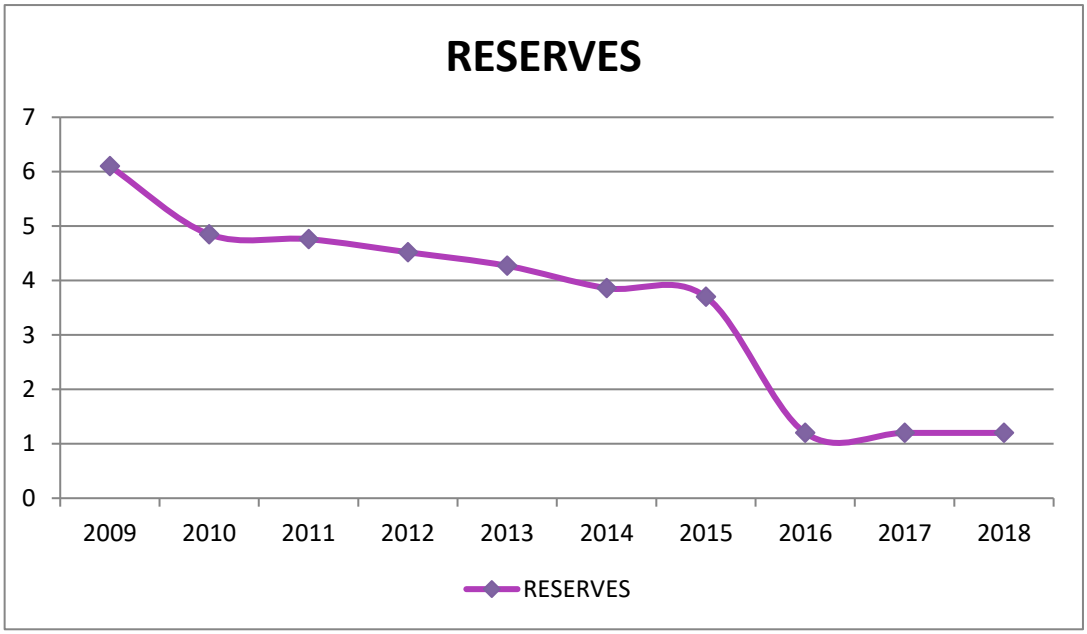
Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Sales	0.37	0.22	0.24	0.24	0.24	0.26	0.31	0.26	0.26	0.26

Land-won and Sand and Gravel – Reserves and Landbank

3.4. Reserves of land-won sand and gravel fell in 2018 as only Astley Moss in Salford contributes to the landbank. Planning permission at Astley Moss is due to expire 31 December 2022. Therefore, unless a new permission is granted, the landbank for sand and gravel in the sub-region will continue to fall; it is already under the minimum of 7 years as set out in the NPPF. A planning application for an extension of time at Morley's Hall Quarry in Wigan, was withdrawn several years ago and the site is now closed, although it is still selling through its stockpiles, and is currently only active for inert landfill.

3.5. Reserves of land-won sand and gravel originating in the sub-region from 2009 to 2018 are shown in Figure 3-2 and Table 3-2.

Figure 3-2: Land won sand and gravel reserves in the sub region, 2009 – 2018 (million tonnes)



3.6. As with sales, due to the commercial confidentiality where there is only one operational sand and gravel quarry, the landbank for aggregate land-won sand and gravel has been based on 3-year averages. As mentioned in paragraph 3.3 above, this is not an ideal approach, but at present it is considered to be the only approach available. The result is that the sales figures for 2016-2018 are all given as 1.2 million tonnes. As of 31st December 2018, the landbank was 4.4 years based on 10-year average sales, or 4.0 years when based on the provision in the Local Aggregate Assessment.

Table 3-2: Land and won sand and gravel reserves in the sub region, 2009 – 2018 (million tonnes)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Reserves	6.10	4.85	4.76	4.52	4.27	3.86	3.7	1.2	1.2	1.2

3.7. Table 3-3 below shows the aggregate land-won sand and gravel landbank as at 31 December 2018.

Table 3-3: Land won sand and gravel landbank in the sub region (31.12.2018) (million tonnes (Mt))

2018 aggregate Sales (Mt)	Permitted Reserves at 31/12/18 (Mt)	Average Annual Sales, previous 3-years (Mt)	Average Annual Sales 2009 – 2018 (Mt)	Landbank as at 31/12/2018 (years) (based on 10 years average sales)	LAA Provision figure (Mt)	Landbank as at 31/12/2018 based on LAA provision figure (years)

0.26	1.20	0.26	0.27	4.4 years	0.3	4.0 years

Land won Crushed Rock - Sales

3.8. Sales of crushed rock (sandstone) originating in the sub-region from 2009 to 2018 are shown in Figure 3-3 and Table 3-4.

3.9. Figure 3-3 shows that total sales of aggregate crushed rock decreased during the 2018 monitoring period from 0.78mt in 2017 to 0.65mt in 2018. However, it is important to note that although the sales have dropped, demand for this material has remained constant and need for the material is currently met through imports into Greater Manchester, Warrington and Merseyside and Halton, this is discussed in further detail later in the report. In addition, with planned growth across Greater Manchester in particular as detailed in the GMSF, demand for crushed rock is likely to increase.

Figure 3-3: Crushed rock sales in the sub region, 2009 - 2018 (million tonnes)

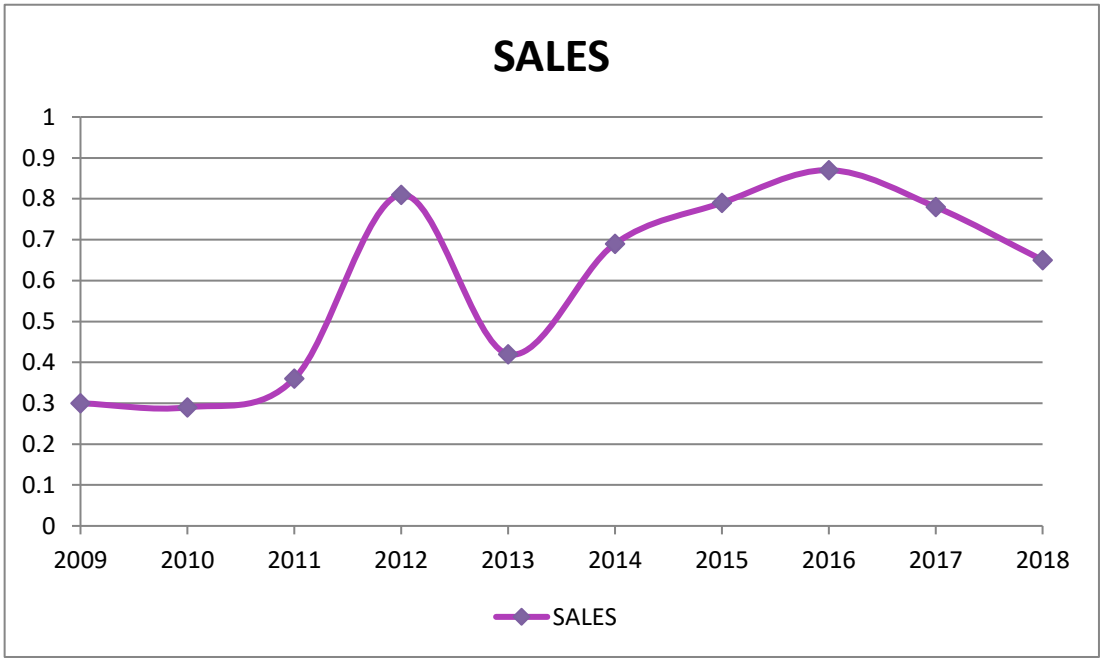


Table 3-4: Crushed rock sales in the sub region 2009 – 2018 (million tonnes)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Sales	0.3	0.29	0.36	0.81	0.42	0.69	0.79	0.87	0.78	0.65

Land-won Crushed Rock – Reserves and Landbank

3.10. Reserves of crushed rock aggregate decreased from 18.37mt as of 31st December 2017 to 17.5mt in December 2018. The landbank as at 31st December 2017 based on average sales from 2008 – 2017 was 30.6 years, compared with a landbank of 29.2 years at 31 December 2018. This is above the 10-year minimum landbank required by NPPF.

3.11. Reserves of crushed rock (sandstone) originating in the sub-region from 2009 to 2018 are shown in Figure 3-4 and Table 3-5.

3.12. Table 3-6 below shows the aggregate crushed rock landbank as at 31 December 2018.

Figure 3-4: Crushed rock reserves in the sub-region 2009-2018 (million tonnes)

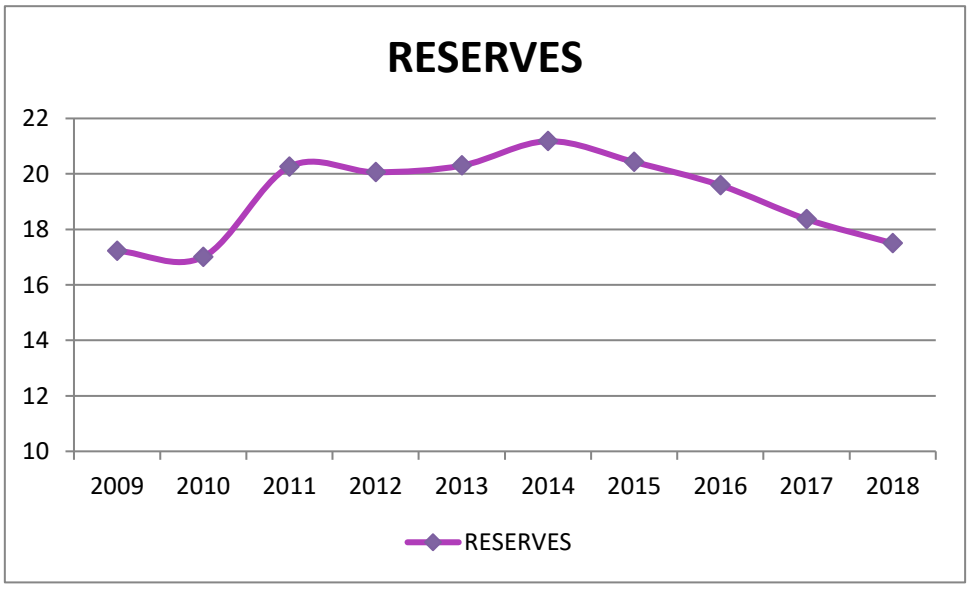


Table 3-5: Crushed rock reserves in the sub-region 2009-2018 (Million tonnes)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Reserves	17.23	17.01	20.26	20.06	20.30	21.18	20.43	19.59	18.37	17.5

3.13. Although there is a healthy landbank for crushed rock in the sub-region, the permitted end dates of quarries in Table 2-2 show that, unless new planning permissions are granted in the interim, six of the nine active crushed rock sites within the sub-region are due to cease operations by December 2026. Although of low quality, the material extracted in the sub-region plays an important local role in reducing vehicle movements of this type of material, and this situation should be monitored closely to identify if applications are coming forward. Going forward, and once we know the results of the aforementioned Aggregate Minerals Survey 2019, we will need to undertake this process as soon as possible.

Table 3-6: Crushed rock landbank in the sub region (31.12.2018) (million tonnes)

2018 Aggregate Sales (Mt)	Permitted Reserves at 31/12/18 (Mt)	Average Annual Sales, previous 3-years (Mt)	Average Annual Sales 2009 – 2018 (Mt)	Landbank as at 31/12/2018 (years) (based on 10 years average sales)	LAA Provision figure (Mt)	Landbank based on LAA provision figure (years)
0.65	17.5	0.77	0.60	29.2	0.85	20.6

Future Demand

3.14. Whilst the 10-year rolling sales average is the starting point for an LAA, any other relevant local information should also be considered in order to forecast future demand for aggregates within the sub-region. The Minerals Planning Practice Guidance states that other relevant information may include levels of planned construction and housebuilding in the area[6].

3.15. The Planning Officers Society and the Mineral Products Association provide further guidance on other indicators that can be used including Gross Domestic Product, population, planned housing and infrastructure demand[7].

3.16. In order to understand the behaviour of the aggregates market within the sub region, this LAA has analysed some key demographic housing and economic indicators to illustrate to what degree the recorded trends in aggregate sales reflect wider economic conditions. Employment in the construction sector, housing completions and GVA forecasts have all also been used as indicators.

Housing Indicators

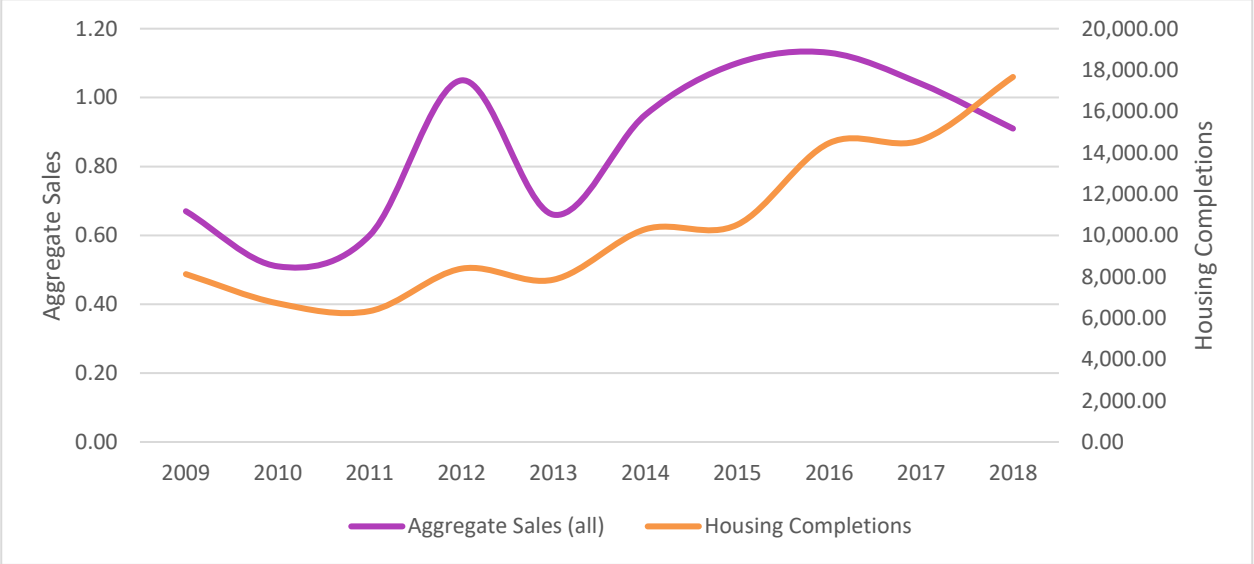
3.17. POS and MPA guidance states that where possible, planned levels of growth (housing provision) should be compared to actual growth (housing completions) to provide an indication of relative scale and therefore of potential implications for demand and supply, especially if provision is higher than the 10 year average being considered[8].

[6] Para 064 Reference ID - 27-064-20140306 https://www.gov.uk/guidance/minerals#Local-Aggregate-Assessments
[7] Practice guidance on the production and use of local aggregate assessments, living document, May 2017 https://mineralproducts.org/documents/LAA_GUIDANCE_May2017.pdf
[8] Practice guidance on the production and use of local aggregate assessments, living document, May 2017 https://mineralproducts.org/documents/LAA_GUIDANCE_May2017.pdf

3.18. As an accepted key indicator of construction sector activity, it is necessary to assess whether past aggregate sales correlate with past housing completion statistics. The 10-year annual average number of housing completions was 10,495, increasing at an average increase of 10.6% per annum. As of 2015 this jumped to an annual average of 14,312 completions at an average increase of 19.8%.

3.19. Figure 3-5 shows a broad correlation but as detailed in Table 13, statistically speaking, the correlation coefficient of 0.65 between the two variables could not be described as being strong.

Figure 3-5: Sub region Housing Completions v Aggregate Sales



3.20. In terms of predicted growth, the combined Local Development Plans within the sub-region propose around 174,357 new dwellings from 2019-2030 which equates to 15,850 housing completions per annum.

3.21. Figures 3-6 and 3-7 show the combined proposed numbers of new dwellings within the sub-region within that time period (in total and per annum).

Figure 3-6: Sub-region Combined Development Plan Housing Trajectories

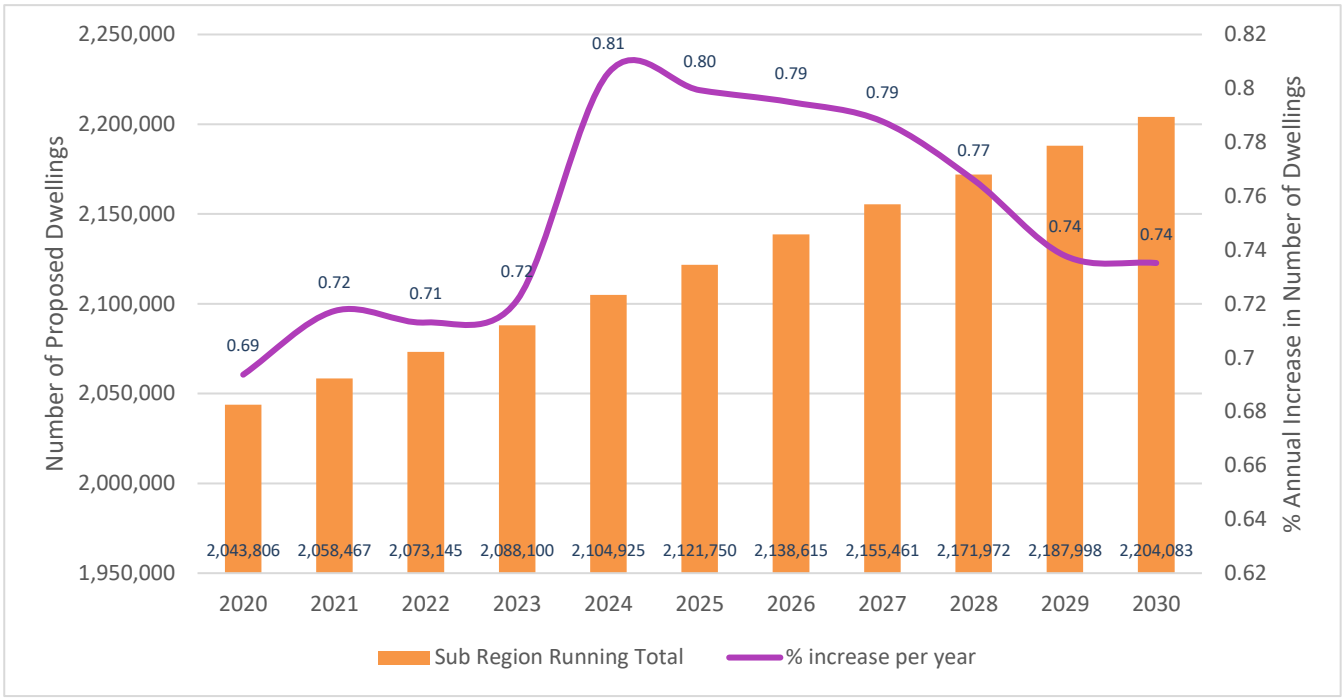
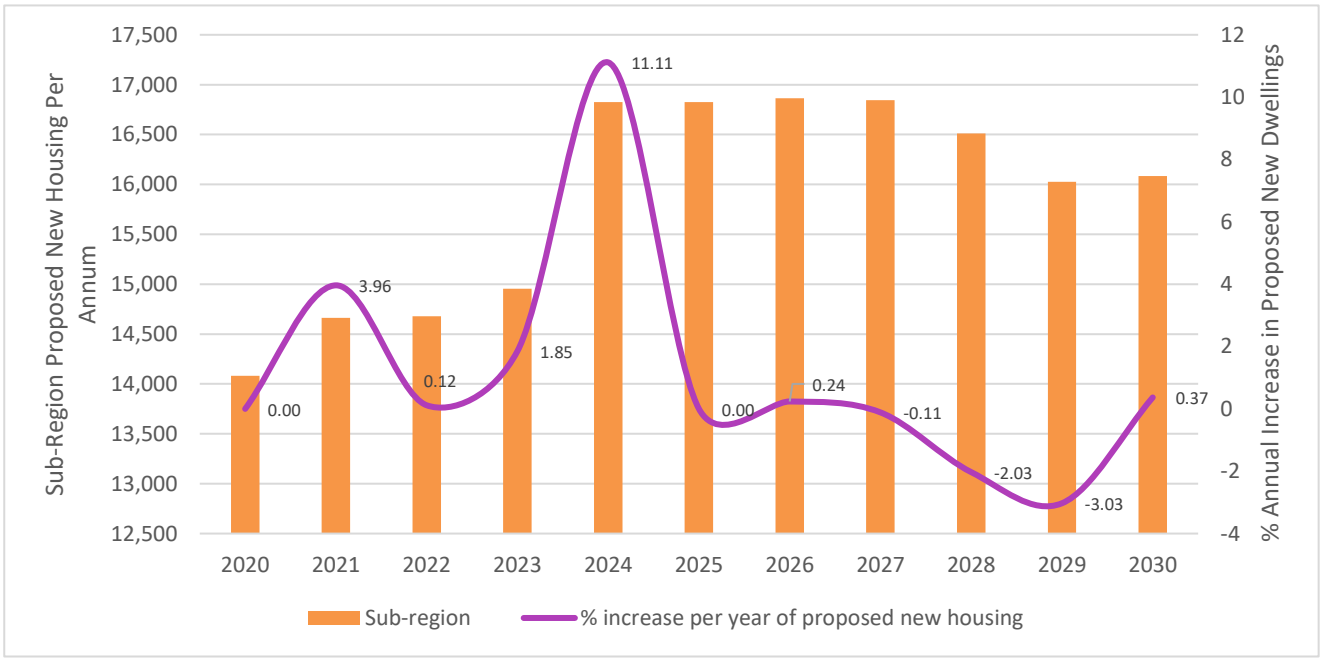


Figure 3-7: Sub-region Combined Proposed New Housing Per Annum



3.22. The Mineral Products Association Report *Mineral Products Industry at a Glance 2016* suggests that 200 tonnes of aggregate are required to build one house. The predicted aggregate requirement for new housing (not including apartments) within the sub-region would therefore be around 35 million tonnes up to 2030. If the European Aggregates Association estimates are used, those figures rise to 400 tonnes of aggregate per house which would equate to around 70 million tonnes in total which would equate to between 1.3mt and 2.9mt of aggregate per year.

3.23. It should be noted that housebuilding can only be used as a partial guide to future demand as aggregates sales reflect much wider demands, including refurbishment of the housing stock and infrastructure maintenance.

Economic Indicators

3.24. The 2018 Greater Manchester Forecasting Model produced by Oxford Economics (2018 GMFM) predicts that, over the period to 2036, construction industry in Greater Manchester will grow by 16,600 jobs (1% per annum). Total employment is forecast to grow at 0.5% per year in GM, equating to a net increase of 140,100 employees 2016 to 2036, compared to 141,000 in the previous GMFM-2017 published model.

3.25. Between now and 2035, the GMFM predicts that GVA growth will average 1.7% per year in Greater Manchester.

3.26. The latest economic forecasts for Warrington were published in the Cheshire and Warrington Strategic Economic Plan (SEP) produced by the Local Enterprise Partnership in July 2017. The SEP sets a target of 31,000 jobs to be created between 2015 and 2040. This equates to an annual rate of 1,240 jobs per annum.

3.27. Similar to the predictions for Greater Manchester, employment growth in Warrington is forecast to largely be driven by business, finance and professional services. In addition, transport and storage employment related jobs are predicted to grow significantly. As with GM, further job losses in manufacturing are forecast and there is some uncertainty about short term growth due to Brexit.

3.28. Figures from the same source produced in 2015 for the Liverpool City Region (LCR) indicate a similar picture. LCR employment in the construction sector fell by 10% in the period 2008-14 but forecasts show the figure recovering to 5% above 2008 levels by 2028.

3.29. Over the ten years 2015-2024 total GVA growth in the LCR of 22% is anticipated, while the forecast for the construction sector over the same period is a similar 24%. This is indicative of an expected return to more normal economic conditions with average annual growth a little above 2%.

3.30. In terms of the wider sub-region, the GVA is expected to grow by an average of around 1.9% per annum up to 2030. It should be noted that these projected levels of growth do not consider the potential impacts of the Covid-19 pandemic and Brexit on the UK economy. It may well be the case that the UK economy will take several years to rebound from the shock of those two ‘events’,

which could in turn have an impact on the demand for minerals across the UK and within the sub-region. This will have to be closely monitored going forward.

Demographic Indicators

3.31. Appendix A shows the projected change in population and households from 2016 to 2039. Although overall population and households are predicted to grow at a lower rate than in England as a whole, it is common sense that the majority of population of the North West's projected population growth over this time period will be within the sub-region.

3.32. The population of the sub-region is predicted to increase by around 425,000 to 4.9m by 2043[9].

Major Infrastructure Projects

3.33. Several significant built infrastructure projects and development projects have been identified that are due to commence or have already commenced. These could require substantial amounts of aggregates and include: Port Salford; Liverpool and Wirral Waters; and the Omega employment site in Warrington.

3.34. The Department for Transport (DfT) awarded Warrington Council funding to develop the business case for a potential new road, which would link the A56 Chester Road in Higher Walton with the A57 Sankey Way in Great Sankey (Warrington Western Link). This would be a significant infrastructure project. Following Executive Board approval of the project team's recommendation, the Outline Business Case was submitted to the DfT in November 2017. In April 2019, Warrington were informed that funding for the scheme had been conditionally approved by Government to a value of £142.5m of the estimated total £212m build cost. The Western Link is now classed as an official Council scheme, and the Council will be pursuing various funding routes for its delivery.

3.35. Progress is being made with several projects related to Liverpool Waters and Wirral Waters, and there are also a number of strategic infrastructure projects in the pipeline across the LCR including several large sustainable urban extensions comprising mixed residential and employment uses.

3.36. The analysis shows that statistically there are not enough strong long-term relationships between aggregate sales and past trends in the identified key indicators to be able to extrapolate from

[9] ONS National Population Projections 2018 - https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2018based

them a definitive projection of future aggregate demand. It is likely that local aggregate production is probably determined by the interaction of a much wider range of factors.

3.37. That being the case, average growth rates for a wider range of demographic, economic and housing indicators have also been used as a guide to help identify as robust a projection for future aggregate sales growth as possible.

3.38. Figures were included up to 2030 where possible and consisted of a combination of past and projected growth rates. These included a range of relevant Office for National Statistics (ONS) forecasts for population, households and economic growth as well as the housing trajectories included within the Local Development Plans within the sub-region.

3.39. The vast majority of the key indicators show between 0.5% and 2% per annum increase in growth. Given the above referenced predicted increase in the economy of the sub-region over the next decade it would seem reasonable to assume that demand for aggregates will also increase at a similar rate. In view of the general level of growth proposed within the sub-region, and the general level of growth of all of the key indicators that have been assessed, it is considered that the 2% projected GVA figure is a reasonable proxy for future aggregate demand in the sub-region.

Table 3-7: Predicted annual sub-regional demand based upon 2% uplift (2018)

	Sand and Gravel	**Crushed Rock**
3-year average	*0.26Mt*	*0.77Mt*
2019	0.265Mt	0.785Mt
2020	0.270Mt	0.801Mt
2021	0.276Mt	0.817Mt
2022	0.281Mt	0.833Mt
2023	0.287Mt	0.850Mt
2024	0.293Mt	0.867Mt
2025	0.298Mt	0.884Mt
2026	0.304Mt	0.902Mt
2027	0.310Mt	0.920Mt
2028	0.317Mt	0.939Mt
Predicted annual demand (average)	**0.29Mt**	**0.86Mt**

Table 3-8: Forecast sub-regional production based on 10-year supply (2018)

	Aggregate	
	Sand and Gravel	**Crushed Rock**
10-year average sales (2009 to 2018)	0.25Mt	0.60Mt
3 year rolling average of sales	0.26Mt	0.77Mt
Predicted annual production	**0.29Mt**	**0.86Mt**
Total Production (2018 to 2033)	**4.35Mt**	**12.9Mt**
Permitted reserves as at 31/12/2018	1.2Mt	17.5Mt
Landbank as at 31/12/2018	**4.12 years (based on existing planning permission)**	**20.35 years**

3.40. The forecast production for sand and gravel is 0.29mt, down 0.14mt on the 2005–2020 annual apportionment requirement of 0.43mt.

3.41. The forecast production for crushed rock is 0.86mt, down 0.46mt on the 2005–2020 annual apportionment requirement of 1.32 mt.

3.42. The landbank for sand and gravel is below the requirement set out in NPPF for a landbank of at least 7 years. The landbank for crushed rock meets the requirement set out in NPPF of at least 10 years. Again, it is important to note that landbanks are based on production rather than consumption, with consumption rates known to be higher for the sub-region and only relate to the contribution the sub-region makes to meeting its needs.

3.43. Based on these figures, the sub-region will make provision for the production of 12.9 million tonnes of crushed rock aggregate for the 15-year period 2018–2033. There were 17.5 million tonnes crushed rock reserves permitted at the end of 2018, so it would appear that there will be no immediate shortfall in relation to local production rates only, although this does not take into account limitations on the planning permission relating to lifespans of quarries or permitted annual extraction. The sub-region will make provision to produce 4.35 million tonnes of sand and gravel for the 15-year period 2018–2033. The landbank for sand and gravel is below the minimum required by NPPF and further permissions are required now.

4. Supply

4.1. Paragraph 63 of the PPG advises that the LAA should consider all aggregate supply options including the following:

- Recycled aggregates;
- Secondary aggregates;
- Marine aggregates;
- Imports to and exports from the MPA area; and
- Land-won resources.

Recycled and Secondary Aggregates

4.2. Recycled Aggregates, which include inert materials such as concrete, stone, brick and other similar materials, are reprocessed materials previously used for construction purposes and which are often taken from the Construction, Demolition and Excavation (CD&E) waste stream. Secondary aggregates are usually by-products of quarrying and mining or industrial processes and can include materials such as clay waste, bottom ash and slag.

4.3. The use of secondary and recycled materials not only reduces the requirement for new production of primary aggregate, but also reduces the need for disposal to landfill of CD&E waste materials. Paragraph 204 of the National Planning Policy Framework recognises this and strongly promotes the use of secondary and recycled materials as an alternative to primary aggregate.

4.4. Data on secondary and recycled aggregate production and use is variable and incomplete. This is because, while some sites operate under permit and can be monitored, much recycling and re-use occurs on individual construction sites, is temporary in nature and does not produce data. The Mineral Products Association (MPA) has published data on the likely contribution that secondary and recycled materials make to the aggregates market, reporting that nationally these materials made up 29% of the market in 2017[10].

4.5. The use of secondary and recycled aggregate materials is acknowledged to be of some importance to the sub-region, as it is heavily urban in nature and therefore is likely to have production levels significant enough to offset considerably against the apportionment figures.

4.6. With regards to sourcing data on CD&E waste, the last regional survey was carried out in 2007[11]. Coupled with the fact that there are generally poor responses from both the waste and

[10] Mineral Products Association – Profile of the UK Mineral Products Industry 2018 Edition
[11] Study to Fill the Evidence Gaps for Construction, Demolition and Excavation Waste Streams in North West England, Smiths Gore, July 2007

construction industry when surveyed about this waste stream, the Environment Agency's database 'Waste Data Interrogator' provides perhaps the best available information.

4.7. Table 4-1 shows the amount of CD&E waste produced and handled at sites in the sub-region in as per the WDI 2018. The figures for 2018 show increases in both the CD&E waste produced and handled within the sub-region. The amount of actual aggregate produced in the sub region from CD&E waste in 2018 was 1.45Mt, which at around 28% is line with the MPA data mentioned in paragraph 4.4, and demonstrates that the sub-region is produced a healthy amount of aggregate from this waste stream which is growing year on year.

4.8. Furthermore, it should be noted that the figures Table 4-1 will not reflect the true amount of CD&E waste produced and managed in the sub-region because it only shows the waste that moves through licenced sites and does not include waste that is reused on site or disposed of at exempt facilities. That being the case, the true figures will likely be higher than those shown below.

Table 4-1: CD&E Waste Produced and Handled in the Sub-region, 2017 (tonnes)

Summary Figures for the Period - 01/01/2018 - 31/12/2018			
Source: Environment Agency Waste Data Interrogator 2018	**Produced**[12]	**Actual Aggregates Produced**	**Handled**
Merseyside & Halton	962,373	331,965	1,326,114
Warrington	397,112	57,273	523,480
Greater Manchester	2,569,517	1,067,501	3,232,810
Totals	3,929,004 (3.92 Mt)	1,456,740 (1.45 Mt)	5,082,405 (5.08 Mt)

4.9. The locations of the CD&E waste management facilities are identified in Map 6. As mentioned, due to the aforesaid challenging nature of collecting data on this particular waste stream, some local authority licensed sites may not be identified on Map 6. In addition, the quality of the spatial

[12] 'Produced' refers to the quantity of useable material produced from the recycling process, whereas 'Handled' refers to the quantity of material processed within the area, not all of which will be reusable; i.e. the 'handled' material is the raw input material and 'produced' material is the end product.

information on Map 6 is varied, as site co-ordinates in the EA interrogator do not necessarily match the site address.

4.10. With regards to secondary waste, one of the primary sources within the sub-region is Pulverised Fuel Ash (PFA) / Furnace Bottom Ash (FBA) from the Fiddler's Ferry facility in Warrington. The most recent figures show a 3-year total sales average for 2017, 2018 and 2019 of around 370,833 tonnes per annum. It should be noted that as of March 31st 2020, Fiddlers Ferry ceased operations. However, the site has significant reserves of wet PFA which constitute in excess of 25 years supply based on recent average sales rates.

4.11. Similarly, another facility in Runcorn is currently recycling an average of around 250,000 tonnes of Incinerator Bottom Ash per annum. In combination with Fiddlers Ferry, around 620,800 tonnes of secondary aggregates are being produced per annum within the sub-region.

4.12. It should be noted that these figures are a minimum and there may well be larger quantities of secondary aggregate being produced within the sub-region. Consequently, efforts will continue to be made to further investigate other potential sources of secondary aggregates within the sub-region.

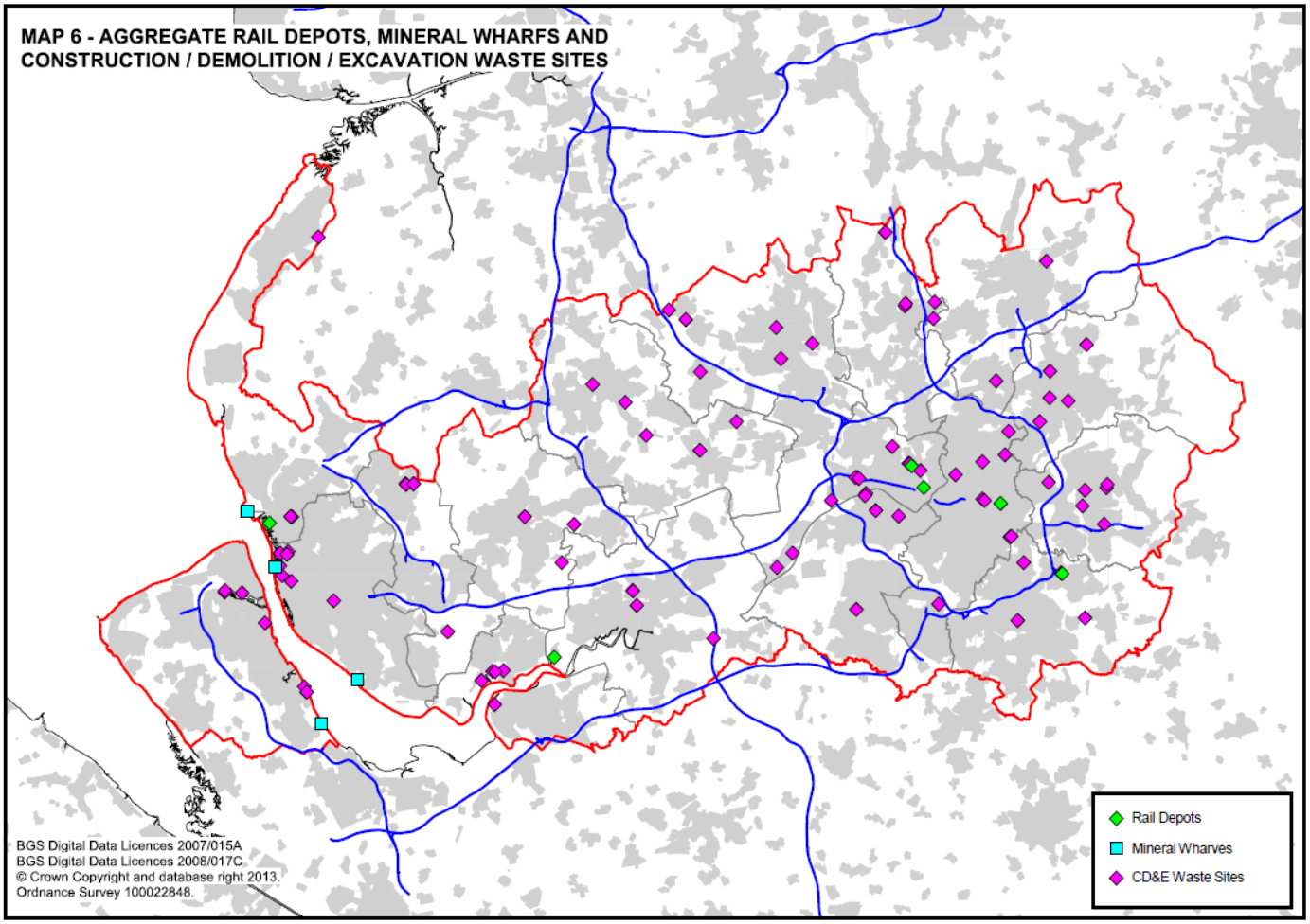
Marine Won Aggregates and Wharves

4.13. The apportionment sub-region contains significant marine infrastructure, most notably in the Port of Liverpool, but also other dock facilities at Garston and a range of smaller wharf facilities along the Manchester Ship Canal to its terminus in Salford. There are significant primary landings of aggregate materials in the Port of Liverpool and at Garston. Most onward trans-shipment is by road and rail, but from time to time some onward trans-shipment by barge may take place.

4.14. The Port of Liverpool also handles landings of significant quantities of crushed rock aggregate shipped from the Glensanda quarry in the West of Scotland. Some 0.35mt of igneous rock from the Glensanda super quarry was landed at Liverpool Wharf in 2018 and used in ready mix concrete; this is a drop from 0.53mt in 2017. This material is transported by road to Cheshire, Lancashire and within the sub-region. Landing of material from Glensanda has not previously been reported in the LAA. However, there was also 0.23mt of sand and gravel landed which was a by-product from Glensanda.

4.15. One of the wharf facilities within the Port of Liverpool (Bramley Moore Dock) is subject to a planning application for a new stadium for Everton Football Club. It is understood that the marine aggregates operation has now relocated to Garston wharf.

4.16. Map 6 identifies wharves in the sub-region where marine-won aggregates are landed.



4.17. The Crown Estate and British Marine Aggregate Producers Association (BMAPA) publish annual dredge and reserves statistics on an annual basis. The 'Marine Aggregates the Crown Estate Licences Summary of Statistics 2018' report, provides summary statistics relating to the dredging and landing of marine dredged aggregate sand. Reserve information is published by The Crown Estate in the 'Capability and Portfolio' report (2018). In addition, The Crown Estate and BMAPA publish a summary of the extraction activity in the 'Area Involved Report', the 20th of which was published in 2018.

4.18. Table 4-2 provides detail of the North West dredging areas. During the 2018 monitoring period there were three active dredging licences operating in water off the North West coast, plus one new dredging application.

Table 4-2: North West marine licences and dredging areas 2018[13]

Area no:	Area name	Licence type	Licence holder	Operational status 201
392	Hilbre Swash	Active dredge area/application area	Tarmac Marine Dredging Active Limited	Active
393	Hilbre Swash	Active dredge area/application area	Norwest Sand and Ballast Co	Active
457	Liverpool Bay	Active dredge area/application area/Option area	Westminster Gravels Ltd	Active

4.19. A total of 288,496 tonnes of material was removed from permitted dredging areas off the North West coast during 2018; of this, 281,839 tonnes was landed at permitted landing points within the North West. Landings at Liverpool ports decreased from 278,617 tonnes in 2017 to 258,070 tonnes landed in 2018[14].

4.20. This is a significant reduction in the amount of material being dredged off the North West coast in 2016, when the total was 1,161,600 tonnes. However, this is due to the material removed in 2018, 2017 consisting solely of primary aggregates. In 2015, just 26% of the total material removed was primary aggregates, 307,074 tonnes, whilst the other 854,526 tonnes were recorded as 'secondary use from licences'[15] likely to be linked to the development of Liverpool Two port expansion.

4.21. Table 4-3 shows the dredging and landing trends in the North West in general, and the landings at the Liverpool wharves, up to 2018. According to the Crown Estate, there are currently seven wharves comprising the Liverpool Port – Albert Dock, Birkenhead, Bramley Moore Dock, Garston, Liverpool, Mersey Wharf and Mostyn[16].

[13] https://explore-marine-plans.marineservices.org.uk/
[14] Marine Aggregates - The Crown Estate Licences - Summary of Statistics 2018
[15] Marine Aggregates: Capability & Portfolio 2018, The Crown Estate, October 2018
[16] Marine Aggregates - The Crown Estate Licences - Summary of Statistics 2018

Table 4-3: Regional Dredging and Landing Statistics (tonnes)

Source - Marine Aggregates: Crown Estate Licences, Summary of Statistics - 2011 to 2018	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
NW licence area – dredged tonnage	635,268	858,813	520,383	2,046,899	1,161,600	321,090	288,496
NW license area – landed tonnage	277,720	369,201	241,578	252,856	302,431	314,113	281,839
Liverpool Wharves	205,528	303,696	202,714	209,939	260,398	278,617	258,070
Barrow (Cumbria)	9,831	11,805	3,790	5,905	10,226	8,327	0
Penrhyn (N Wales)	62,361	53,700	35,074	37,012	31,807	27,169	23,769

4.22. One of the key issues relating to reducing supply is poor demand; however, with the pressures on land resources, it is expected that marine aggregates may play an increasingly important role and with an annual capacity of 1,200,000 tonnes there is sufficient capacity for this to occur. This can be seen with the renewal for a 15-year period of the Hilbre Swash (off North Wales) licences at the start of 2014, and with Hanson Aggregates Marine Ltd being awarded a new Option and Exploration Agreement in 2014. The 2018 tender round is almost complete, and if there is a move from exploration to extraction a further 500,000 tonnes capacity would be available. There would appear, therefore, to be considerable potential to increase the substitution of marine dredged sand for that which is land-won.

4.23. The 'Marine Aggregates Capability and Portfolio Document 2018', reports that there are currently 12.56mt of primary marine aggregate reserves in the north west dredging areas, which when compared to the 10-year average annual off take rate, would provide a reserve life of approximately 37.49 years.

4.24. It is understood that one of the biggest restrictions on medium term market development for marine aggregates into the LAA area relates to the supply chain from the wharf to the concrete plants (the consumer). With intermodal transport limited and rail enabled access at concrete plants also restricted further work is required to understand and potentially develop solutions around this question. Going forward, the LAA area commits to working with the Crown Estate and other sub-regions to build an understanding of the size and complexity of the demand profile into the future as part of that investigation.

Movement of Aggregates – Imports/Exports

4.25. Information on imports and exports of aggregates into and out of the sub-region is taken from the Aggregates Minerals Survey 2014 undertaken jointly between the Department for Communities and Local Government (DCLG) and the British Geological Survey (BGS). This is the most up-to-date data available on flows of aggregate materials. The data tables express the movement of minerals in percentage ranges, so there are limitations in the precision of the data. This report also provides vital information on consumption rates of aggregates, which for the sub-region indicates a high reliance on imports for maintenance of future supply.

4.26. The Aggregate Minerals Survey 2014 reports that the North West consumed 15,363 thousand tonnes of primary aggregate in 2014, 45% of which originated within the North West and 55% of which was imported into the region. No separate data for the LAA sub-region has been published. Table 4-4: North West Net Imports/Exports (2014), shows net imports and exports into/out of the region in 2014. In summary, the North West region is a net exporter of sand and gravel and a net importer of crushed rock.

Table 4-4: North West Net Imports/Exports (2014)

	Import (000 tonnes)	Export (000 tonnes)	Balance (000 tonnes)
Sand & Gravel (land won and marine)	240	723	-483 (net export)
Crushed Rock	7,740	313	+7,427 (net import)

4.27. In order of volume, the North West imported sand and gravel from the following regions in 2014:

- North Wales (140,000)
- West Midlands (70,000)
- Yorkshire and Humber (12,000)
- South East (12,000)

- East Midlands (3,000)
- East of England (1,000)

4.28. In order of volume, the North West imported crushed rock from the following regions in 2014:

- East Midlands (3,831,000)
- North Wales (2,131,000)
- Yorkshire & Humber (836,000)
- Outside England & Wales (400,000)
- West Midlands (357,000)
- South Wales (142,000)
- North East (44,000)

4.29. The previous Aggregate Minerals Survey 2009 survey did not specify where the sub-region imports materials from, whereas the Aggregate Minerals Survey 2014 survey has improved on this, so it is now possible to indicate from where material comes into the sub-region. Sand and Gravel is mainly imported from other parts of the North West, with Cheshire West and Chester being the largest source (20-30% of consumption); Cheshire East, Lancashire and Cumbria are also significant sources (1-10%). Only Staffordshire reported significant shipments to the sub-region from outside of the North West (1-10%), while very small contributions were also recorded from Lincolnshire and Nottinghamshire (<1%). The sub-region therefore imports significant quantities of sand and gravel from land won sources and this trend is expected to continue.

4.30. The reported position with Crushed Rock is more complex. Very significant imports to the sub-region are reported from Derbyshire and the Peak District National Park (20-30%), while Flintshire is also a significant supplier (10-20%); quantities also come from Cumbria, the Yorkshire Dales and Shropshire (1-10%), with small shipments also recorded from a further 9 mineral planning authority areas. This reflects the need for high quality crushed rock in the sub-region and the lack of local resources to supply it. The sub-region also borders both North Wales which produces crushed rock in relatively convenient locations to facilitate supply into the sub-region.

4.31. Table 4-5 shows sub-regional imports and consumption of primary aggregates in 2014. It shows that the sub-region imported 92% of the crushed rock consumed, either from elsewhere in the North West or beyond. This can be explained by the fact that the quality of crushed rock extracted in the sub-region is of a lower quality than that required for many construction activities and is understood to be mainly used as bulk fill. Therefore, the sub-region must import the higher quality crushed rock aggregate for use in construction projects as it is not available locally and it is likely

that this will continue. Again, this is a trend which is not expected to change in coming years, especially as a high proportion of existing sub-regional sites are due to close in the next 8 years.

4.32. The sub-region has undertaken duty to co-operate discussions by contacting areas outside the sub-region (see Appendix B for full list).

Table 4-5: Sub-regional imports and consumption of primary aggregates in 2014[17]

	Import (tonnes)	Consumption (tonnes)	Net imports as a % of consumption
Sand & Gravel (including Marine)	214,000	280,000	76%
Crushed Rock	3,233,000	3,465,000	93%
Total Aggregate	**3,447,000**	**3,744,000**	**92%**

4.33. The sub-region imported 76% of sand and gravel consumed in 2009, either from elsewhere in the North West or from beyond the North West; this figure remained the same for 2014. The sub-region imported 92% of crushed rock consumed in 2009; this rose to 93% for 2014. The data indicates that the sub-region continues to rely on imports to supply the majority of its requirements for sand and gravel and crushed rock. As such, the consumption rate of aggregates in the sub-region is more important in terms of future supply needs than the sales, which reflect production rates. This means that there is an increasingly important role for marine-won sand and gravel going forward.

4.34. As mentioned in paragraph 4.30, a significant proportion of the crushed rock imported into the sub-region comes from Derbyshire and the Peak District National Park (PDNP). The 2018 LAA between Derbyshire County Council and Derby City Council (2019) sets out their joint approach to apportionment. The National Park's provision figure was reduced by 10% with a compensatory equivalent increase to Derbyshire County Council's figure. Their current LAA apportionment figure is therefore 12.46 million tonnes per annum (9.26mtpa for Derbyshire and 3.20mtpa for the PDNP). There are currently no indications to suggest that production will not continue around this rate for the foreseeable future. However, production of aggregate crushed rock will continue to be monitored on an annual basis and, along with other factors such as the NPPF requirement to

[17] Table 4-4 includes imports from other authorities within the North West as well as any imports from outside the North West. It is therefore not directly comparable with the information in Table 4-5.

maintain landbanks outside National Parks, will inform the review of provision rate figures in future LAAs.

4.35. As set out in the Local Aggregate Assessment for the North Yorkshire Sub-region (2017), in 2014, the DCLG/BGS survey noted that 856,157 tonnes of stone were sold from the Yorkshire Dales National Park (YDNP) to the North West region, which represents 28% of the National Park's total sales for that year. Within that 28%, somewhere between 1 and 10% was exported to the Manchester/Merseyside/Warrington sub-region, equating to between 34,000 to 340,000 tonnes. Also, in the YDNP, a railhead was commissioned by Tarmac at Arcow Quarry in Ribblesdale in January 2016. At present this is being used for trains taking stone from both Arcow Quarry and Dry Rigg Quarry (also Tarmac) to the Greater Manchester rail depots at Bredbury (Stockport) and Agecroft (Salford).

4.36. Despite the NPPF seeking to reduce reliance on the National Parks as a source of crushed rock aggregate, as far as is practical, there is still a very large proportion of both PDNP and YDNP crushed rock being exported, of which the urban sub-region of Greater Manchester/Merseyside/Warrington benefits. Both National Park LAAs recognise this and, in general, state that there is good potential to maintain the overall supply of limestone crushed rock from within their sub-regions over the period to 2030 at levels like those sustained in recent years.

4.37. North Wales, especially Flintshire, is an important source of both sand and gravel and crushed rock imported into the North West in general and the sub-region in particular. The Aggregate Minerals Survey 2014 survey stated that 140,000 tonnes of sand and gravel was imported from North Wales (source of the highest import tonnage), whilst 2,131,000 tonnes of crushed rock was imported from North Wales (the second highest import tonnage). Contact has been made with the North Wales authorities as part of the work undertaken to support this LAA (see Appendix B); no response has yet been received but co-operation with the North Wales authorities will be important going forward.

4.38. The Aggregate Minerals Survey 2014 survey provides some details of exports from the sub-region. However, these are limited and local, given the quality of material found and the constraints of the urban area. Given this, communication and co-operation with those authorities that import primary aggregates into the sub-region is of obvious importance.

4.39. Most aggregates are transported into the sub-region by road. However, there are several aggregate rail depots in the sub-region, and these are shown on Map 6. For example, the Cemex site in Salford imports significant quantities of materials by rail, averaging around 650,000 tonnes

per annum. Indications are that the material imported through Merseyside Wharves is used entirely within the North West. As a result, there is a need to safeguard this infrastructure from encroachment from other forms of development.

Future Supply

4.40. The position regarding primary aggregate extraction in the sub-region should be kept under review through future LAAs, because the Sand and Gravel landbank situation is critical and needs close examination. This issue was raised with the MHCLG representative at the most recent NWAWP on 5th November 2020 and we await their advice on the best way forward.

4.41. The aggregate produced in the sub-region is locally important and districts should ensure that plans/policies are in place to ensure a continued supply.

4.42. The national Marine Policy Statement (2011) highlights the importance of marine aggregate in UK supply and the NPPF and associated guidance also provide support for use of this source of supply. The port facilities of the Mersey Estuary are likely to continue to function as significant landing and transhipment points for aggregate materials coming into the area. The future of marine aggregate extraction in Liverpool Bay seems secure and remains economically significant but is increasingly competing with other priorities in the offshore area and it could be that available areas for extraction may become increasingly restricted in the future. In this respect, the first Marine Spatial Plan for the Irish Sea area (the North West Marine Plan), to be prepared by the Marine Management Organisation will have a significant role to play, subject to the capacity constraints of the port. The draft NW Marine Plan was issued by MMO for consultation in January 2020 and this did indicate that different parts of the seabed would be safeguarded for specific uses.

4.43. Robust data on the use of alternative aggregates has proved very difficult to obtain, particularly at the local level. This is a data gap that will need to be filled in the future particularly if, as an area that is not self-sufficient in land-won aggregates, we wish to understand more fully and address the extent to which a dependence exists on material imported from other areas. This data gap has been recognised by the AWP, which has noted it as a priority for joint action at AWP level to address it.

4.44. A key issue for the sub-region is the importation of aggregates from within the North West and beyond. In order to meet construction needs, it is likely that imports will continue to be required. Therefore, safeguarding of rail depots and wharves by the MPAs is an increasingly important requirement as prescribed in the NPPF.

4.45. Although it is difficult to quantify, it is presumed that a higher level of aggregates will be needed to meet demand. Most of the aggregate required will continue to be imported, and it is anticipated this will be at higher rates than at present. The sub-region will undertake duty to co-operate

discussions with areas outside the sub-region as part of the next period of reporting to ensure it can continue to meet demand.

5. Opportunities and Constraints

Sub-Region Apportionment Position

Current Aggregate Apportionment (2005 – 2020)

5.1. Prior to publication of the first edition of the National Planning Policy Framework (NPPF) in 2012, national aggregate policy was set out by Government in Minerals Planning Statement 1 (MPS1), which required Mineral Planning Authorities (MPAs) to make provision for the sub-regional apportionment of the National and Regional Guidelines for Aggregate Provision 2005-2020[18], which were most recently updated in June 2009. The key regional guideline figures are reproduced in Table 5-1 along with the national figures for comparison. These figures are generally considered dated, although some Local Authorities still use them, and MHCLG has been asked to update these. In a meeting held in July 2010, the MPAs within the North West AWP voted in favour of an 8-year average model. The agreed apportionments are outlined in Table 5-2 below.

Table 5-1: Comparison of National and Regional Apportionment Guidelines for England (2009)

Region	Land-won provision		Assumptions		
	Land-won Sand & Gravel (Mt)	Land-won Crushed Rock (Mt)	Marine Sand & Gravel (Mt)	Alternative Materials (Mt)	Net Imports to England (Mt)
North West	52	154	15	117	55
England	1028	1492	259	993	136

Table 5-2: 2005-2020 North West Sub-regions - Agreed Apportionments

Sub-Region	Land-won provision	
	Land-won Sand & Gravel (Mt)	Land-won Crushed Rock (Mt)
Cheshire	1.51	0.04
Cumbria	0.88	4.02
Greater Manchester, Merseyside, Halton and Warrington	**0.43**	**1.32**
Lancashire	0.44	4.24

[18] National and regional guidelines for aggregates provision in England 2005-2020 (DCLG, June 2009)

Supply

5.2. Annual surveys of aggregate sales and reserves have historically been undertaken by the North West AWP and provide a basis for establishing future supply and demand. There has been a decline in sales of land won sand and gravel and an increase in the sales of crushed rock in the sub-region. It is thought that is due to:

- Closure of sand and gravel quarries, which have not been replenished;
- Development of more efficient construction techniques requiring less aggregate;
- Increased use of marine won aggregate and secondary and recycled aggregates.

5.3. Current primary mineral extraction (sand and gravel and crushed rock production) in the sub-region is limited. Reasons for this could include the extent of the urban area and the quality of materials found in the sub-region. The sub-region contains several large urban areas (Liverpool, Manchester and Warrington), which restrict the land available for minerals extraction. In addition, the local geology dictates that high specification materials for construction and infrastructure projects are not locally available and must be imported.

5.4. As part of Warrington Borough Council's Local Plan review that commenced in 2016 the Council undertook a Call for Sites exercise between October and December 2016 in order to identify any potential mineral sites. However, no sites were nominated by consultees for consideration as part of the Local Plan review. Therefore, in addition, as part of the Council's assessment of mineral resources in the borough[19], Urban Vision reviewed the potential sites/areas identified within the previous minerals resource assessment of 2009[20], including contacting those operators and landowners who originally nominated sites to establish whether they wished the sites to be considered within the Local Plan review. Only one landowner responded requesting their site be considered as part of this latest review as a potential Area of Search for Sand and Gravel. However, when this site was put through the Council's site assessment process it was not considered appropriate to allocate it as the area where the site is located is not identified in the BGS 1:100,000 Minerals Resource Map as a sand & gravel resource; there was no record of site investigations provided; and there were a number of environmental and amenity constraints.

5.5. No planning applications have come forward for minerals development within the sub-region within the most recent LAA period, but it is understood that there has been some interest in

[19] Urban Vision - Mineral Resource Study and Policy Review (March 2017)
[20] Urban Vision - Study into Minerals Resources in Warrington (November 2009)

reopening inactive sites in recent years with potential for extensions coming forward to existing sites.

5.6. In recent years the emphasis in waste management policy on increased recycling has led to rapid growth in the market for substitute aggregate materials and facilities for processing construction and demolition waste to produce them. In some circumstances materials from other industrial processes can also be used for this purpose. As mentioned previously, there are significant amounts of recycled and secondary aggregates being produced within the sub-region. Unfortunately, robust data on the production, distribution or use of alternative aggregates remains difficult to obtain, and it should also be acknowledged that secondary aggregates can be constrained by availability, quality and specification. However, the figures included previously in paragraphs 4.10-4.12 are considered to minimum figures and, it is not unreasonable to expect those figures to continue to rise in the immediate future. This expectation is especially relevant to the LAA sub-region when considering its aforementioned urban nature and the higher levels of construction demolition that can be expected in association with the development anticipated to come forward through the Local Plans in the area. In addition, the expectation for higher levels of recycled and secondary aggregates is driven by policy, regulation and market factors - a position acknowledged by DEFRA in respect of its obligations to report progress against the target set by the Waste Framework Directive to recover 70% of construction and demolition waste by 2020.

Demand

5.7. Given the above, it is likely that imports of primary aggregate material into the sub-region will continue to be important, especially when the consumption rate of material is considered, which shows that this is the main source of aggregates, with import levels at around 3.447mt in 2014. It is also likely that secondary and recycled aggregates will continue to compete with primary aggregate extracted in the sub-region. However, the sub-region is an important landing point for marine-won sand and gravel from the licensed dredging areas offshore and its wharves also handle significant shipments of crushed rock from quarries elsewhere in the UK. It is understood that as market demand increases it will be possible to increase marine supply in the short to medium term to meet this need.

5.8. Forecasting future aggregate market conditions is difficult. Since 2010, the sub-region has experienced some post-recessionary economic growth. Whilst the pre-recessionary peak for sales was reached in 2006 with 1.94mt of recorded aggregate sales, aggregate sales data does show a general recovery in demand within the sub-region from 2010 onwards, with sales of 0.51mt in 2010 increasing to 0.91mt by 2018. Consumption rates also suggest that demand is

high, and it is clear that the importation of aggregates which will continue to be important in terms of meeting the future aggregate needs of the sub-region.

5.9. The Crown Estate has noted that marine aggregate demand has recovered to exceed pre 2008 recession levels in some markets. It is anticipated that marine aggregates could supply increasing amounts of aggregate to the sub-region in the coming years as further dredging possibilities in the Irish Sea begin to open up. As mentioned previously in this report, the LAA area will continue to work with the Crown Estate and other sub-regions to build an understanding of the size and complexity of the demand profile into the future.

5.10. Given the predicted increase in housing completions, employment, infrastructure projects and the economy in general across the sub-region, it is considered reasonable to apply an 'uplift' to future predicted demand for aggregates, rather than the previous 10-year average sales data. Appendix A identifies a 2% annual uplift in predicted aggregate production (based upon economic predictions outlined earlier in this report), taking the 3-year rolling sales average as the baseline figure to give a more realistic indicator for recent demand. This has been applied over the next ten years and then an average figure taken as the predicted annual production. Actual demand is higher than local production rates and up to date consumption figures are only available up to 2014. The Aggregate Minerals Survey 2014 highlights the North West as one of the areas of England most heavily reliant on imports, with 45% of requirements being met by imports, and in the sub-region this rises to 92% of aggregate requirements met through imports.

6. Key Messages, Cross-Boundary Liaison and Future Review

6.1. This LAA has been produced jointly for the 17 unitary local authorities comprising the aggregate apportionment sub-region of Merseyside, Greater Manchester and Warrington. Its principal conclusion is that the authorities of the sub-region should adopt a 2% annual uplift for predicted future production and consumption for aggregates, in line with predicted economic growth. The sub-region has not met apportionment for some time and evidence from industry is that there is limited interest or expectation in being able to take advantage of whatever aggregate materials sub-region may be able to provide. There is no indication that this position is likely to change in the immediate future, as no new proposals for quarries are currently known and feedback from industry members of the AWP suggest there is no interest in the sub-region.

6.2. It is acknowledged that there are serious concerns about the shortfall in aggregates within the LAA region. However, it should be noted that the constituent LAA members are being as proactive as possible with regards to addressing this issue. As mentioned earlier in this report, this matter has been raised with MHCLG, and a meeting arranged by the LAA region with the Crown Estate and the wider NWAWP area members to discuss the future possibilities for marine aggregates within the region took place in early December 2020. The situation will be kept under review through future LAAs and the MPAs of the sub-region will respond as the evidence requires. Going forward, it is acknowledged that an annual update on Duty to Cooperate (DtC) work and or meetings should be provided in order to continue to demonstrate the efforts made by the sub-region and surrounding MPAs to work together to identify and attempt to address these issues.

6.3. With that in mind, the sub-region has initiated further DtC discussions which have been detailed in Appendix B below.

6.4. Although the report has highlighted a number of areas where data is weak, absent or not readily applicable at MPA level, it is possible to identify a number of key issues for policy makers in individual MPAs, taking account of their local circumstances and the position for the sub-region identified by the LAA. Again, this has been pointed out to MHCLG – the return of the Aggregate Minerals Survey 2019 is critical and the need for sub-regional guidelines is imperative. These key messages for the future direction of policy for the MPAs are set out in Table 6-1 below.

6.5. In summary, there are several broader messages that emerge from this process that apply to the strategic position in the sub-region and the strengthening of the LAA process for the future:

- Continued engagement with MHCLG on the specific issues within the LAA region and NW in general.
- Continued liaison with Crown Estate to discuss further possible supply of marine aggregates in future.
- There is a need to continue to liaise with those authorities, including relevant National Parks, that export aggregates to the sub-region as these are important to ensure future growth ambitions are realised.
- There is a need to report relevant outcomes of any Duty to Co-operate meetings held by the sub-region with those authorities, both within and outside the North West region, who import aggregates to the sub-region.
- There is a need to monitor permitted sand and gravel and crushed rock reserves as they become depleted, to ensure steady and adequate supply.
- Future marine aggregate extraction may be increasingly important to the supply of aggregates in the sub-region and North West more generally, as a result the North West Marine Plan may need to be considered in future Local Aggregate Assessments.
- There is a scope for secondary and recycled aggregates to provide a greater proportion of the sub-regions aggregate supply in the future and opportunities will be sought to increase understanding of this material and the level of supply and demand.
- There is a need to safeguard mineral resources as well as the critical transport and processing facilities that are essential for distribution and processing of aggregates.
- Currently consumption continues to be greater than production which forms a potential a risk to achieving growth aspirations in the sub-region.

Table 6-1: Planning implications summary

Mineral Planning Authority	Aggregate Resources Present?	Aggregate Extraction Sites with Live Consents?	Aggregate Wharves?	Planning Implications
Greater Manchester Authorities (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan)	Yes	Yes	No	• The Greater Manchester Minerals Plan was adopted in April 2013. The Minerals Plan identifies Areas of Search which could contribute to meeting any shortfall in provision of aggregates during the Plan Period should a suitable planning application be made. • Greater Manchester to continue to work with industry in order to contribute to the apportionment and participate in AWP. • Link with Minerals Plan and LAA recognised in draft Greater Manchester Spatial Framework • Safeguarding of mineral resources and processing facilities
Halton	No	No	No	• Prioritise use of secondary and recycled material. • Safeguard critical transport infrastructure and processing facilities. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA.
Knowsley	No	No	No	• Prioritise use of secondary and recycled material. • Safeguard critical transport infrastructure and processing facilities. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA. • Safeguarding of mineral resources
Liverpool	No	No	Yes	• Prioritise use of secondary and recycled material. • Safeguard wharves and transport infrastructure and processing facilities –one wharf recently lost but relocated nearby. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA. • Safeguarding of mineral resources

Mineral Planning Authority	Aggregate Resources Present?	Aggregate Extraction Sites with Live Consents?	Aggregate Wharves?	Planning Implications
Sefton	No	No	Yes	• Prioritise use of secondary and recycled material. • Safeguard wharves and transport infrastructure and processing facilities. • Continue to work with industry in order to contribute to the apportionment and participate in AWP • Safeguarding of mineral resources
St Helens	Yes	Yes	No	• Prioritise use of secondary and recycled material. • Safeguard critical transport infrastructure and processing facilities. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA. • Safeguarding of mineral resources
Warrington	Yes	Yes	No	• Prioritise use of secondary and recycled material. • Safeguard critical transport infrastructure and processing facilities. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA. • Safeguarding of mineral resources
Wirral	No	No	Yes	• Prioritise use of secondary and recycled material. • Safeguard wharves and associated transport infrastructure and processing facilities • Safeguard critical transport infrastructure. • Provide for windfall applications appropriately. • Continue to work with industry in order to contribute to the apportionment and participate in AWP. • Monitor landbank adequacy through annual LAA. • Safeguarding of mineral resources

7. Appendix A

Table A - Key Indicators

Year	Sales Of aggregate [1]	Population [2]	Total GVA [3]	GVA of construction sector [3]	Total employment [4]	Employment In construction sector [4]	Dwelling stock [5]	Housing completions [6]
2007		4,284,700	1,629.50	1,959.50				
2008		4,309,900	1,612.50	1,916.10				
2009	0.67	4,335,300	1,579.10	1,702.60			1,964,894	8,122
2010	0.51	4,363,800	1,602.00	1,668.00			1,971,377	6,710
2011	0.6	4,394,600	1,589.80	1,658.20			1,977,860	6,335
2012	1.05	4,417,400	1,592.10	1,529.70			1,984,344	8,389
2013	0.66	4,433,000	1,626.70	1,480.70			1,990,827	7,854
2014	0.95	4,456,800	1,652.40	1,572.70			1,997,310	10,295
2015	1.1	4,490,000	1,698.80	1,609.40	1,998,000	83,000	2,003,793	10,514
2016	1.13	4,528,300	1,700.00	1,700.00	2,064,000	80,000	2,010,276	14,464
2017	1.04	4,552,900	1,753.10	1,869.70	2,112,000	95,000	2,016,760	14,604
2018	0.91	4,573,600	1,769.80	1,871.60	2,146,000	95,000	2,029,726	17,664

Table B - % Annual Change of Sales of Aggregates and Key Indicators

Year	% Change Aggregate Sales	% Change Population	% Change Total GVA	% Change GVA Construction	% Change Total Employment	% Change Construction Employment	% Average Annual Change Dwelling Stock	% Change Housing Completions
2007								
2008		0.59	-1.04	-2.21				
2009		0.59	-2.07	-11.14				
2010	-23.88	0.66	1.45	-2.03			0.33	-17.38
2011	17.65	0.71	-0.76	-0.59			0.33	-5.59
2012	75.00	0.52	0.14	-7.75			0.33	32.42
2013	-37.14	0.35	2.17	-3.20			0.33	-6.38
2014	43.94	0.54	1.58	6.21			0.33	31.08
2015	15.79	0.74	2.81	2.33			0.32	2.13
2016	2.73	0.85	0.07	5.63	3.30	-3.61	0.32	37.57
2017	-7.96	0.54	3.12	9.98	2.33	18.75	0.32	0.97
2018	-12.50	0.45	0.95	0.10	1.61	0.00	0.64	20.95

Table C - Correlation between Aggregate Sales and Key Indicators 2009-2018

	Population [2]	Total GVA [3]	GVA of construction sector [3]	Total employment [4]	Employment In construction sector [4]	Dwelling stock [5]	Housing completions [6]
Aggregate Sales	0.71	0.62	0.15	-0.79	-0.83	0.68	0.65

As demonstrated in Table C above, there is some positive correlation between aggregate sales and the majority of the key indicators. However, statistically speaking, there is no *strong* correlation between aggregate sales in the sub region and any of the key indicators apart from population. That said, dwelling stock and housing completions in particular did increase between 2007 and 2018.

Comparison of projected growth rate of Key Indicators

Table D below includes several historic and projected growth rates.

The data upon which these growth rates is based uses the most recently published data. However, in the interests of completeness, both the 2014 and 2016-based household projections have been included.

Table D - Historic and projected future growth rates for key indicators

	Area	Description	Time period	Growth Rate (% average change per annum)
	Population	Population – historic [1]	2007-18	0.51
		Population – 2018-based subnational projections		
		Principal projection (based on 5 years of migration data) [2]	2018-43	0.36
		Variant projection based on 10 years of migration data [3]		0.28
		High migration variant projection [3]		0.51
		Low migration variant projection [3]		0.21
	Housing	Households – 2016-based projections		
		Principal projection (based on 5 years of migration data) [4]		0.5
		Variant projection based on 10 years of migration data [5]		0.5
		High migration variant projection [5]		0.6
		Low migration variant projection [5]		0.4
		Households – 2014-based (principal) projection [6]		0.6
		Dwelling stock – historic [7]	2009-2018	0.3
		Dwelling stock – projected growth rate per annum to achieve Development Plan housing trajectories	2019-30	0.78
		Employment total (all industries) – historic [8]		2.4
		Employment in Construction – historic [8]		5
	Economy	GVA total (all industries) – historic [9] Employment in construction industry – projection [9]		1.9
		GVA in construction industry – GVA total (all industries) – historic [9]		0.71.9
		GVA total (all industries) –GVA in construction industry – historic [9]		20.7

		GVA in construction industry – GVA total (all industries) – projection [9]		0.72
		GVA in construction industry – projection [9]		0.7

1 - Office for National Statistics (ONS) mid-year population estimates for 1981-2018 (June 2019 release). ONS Crown Copyright 2019. ONS licensed under the Open Government Licence v. 3.0

2 - ONS 2018-based subnational population projections, May 2018

3 - 2016-based subnational variant population projections, ONS, April 2019

4 - 2016-based household projections for England and local authority districts, Office for National Statistics (ONS), September 2018

5 - 2016-based variant household projections for England and local authority districts, Office for National Statistics (ONS), May 2019

6 - 2014-based household projections for England and local authority districts, DCLG, July 2016.

7 - Number of Dwellings by Tenure and district: England, live dwellings tables, MHCLG, May 2019

8 - Business Register and Employment Survey (BRES) open access data series for 2015-18, Office for National Statistics (ONS), NOMIS. Crown Copyright 2019. These BRES figures include working owners - self-employed people registered for VAT and PAYE schemes - as well as employees. Self-employed people not registered for these schemes, along with HM Forces and Government supported trainees, are excluded. The figures include businesses registered for PAYE but not for VAT, so are not continuous with BRES datasets for years prior to 2015.

9 - Regional Gross Value Added (Balanced Approach) UK 1998-2018 data, Office for National Statistics (ONS), December 2019.

Forecasting the future need for aggregate sales

The estimated future need for aggregates takes the latest 10-year (2009-18) sales average as its baseline figure, rather than a 3-year average. This is the recommended approach in the minerals planning practice guidance. GVA growth rates take growth in productivity and technological change into account. Therefore, it is considered that GVA is the best available measure of any longer-term changes in the size of the economy.

Cheshire East have also based their local aggregate assessment future need forecasts on GVA, showing that this approach is not unique to the sub-region.

Table E shows that the 10-year (2009-18) baseline average for aggregate sales is 0.266 million tonnes (Mt) for sand and gravel and 0.596mt for crushed rock. A 2% growth in sales per annum, would result in sales of 0.337mt of sand & gravel and 0.756mt crushed rock by 2030.

That being the case, the average annual aggregate sales forecast would equate to 0.502Mt for sand & gravel and 0.001 Mt for crushed rock.

In order to test the sensitivity of the forecasts to alternative assumptions the forecasts in Table E use the 3-year sales average as the baseline.

The two forecasted levels of aggregate need vary from 0.337mt to 0.330mt for sand and gravel and 0.756mt to 0.972mt for crushed rock

The preferred 10-year average approach, under which aggregate sales are projected to be higher than the 3-year average at 0.337mt for sand and gravel but lower for crushed rock at 0.756mt by 2030.

Table E: Forecast of aggregate sales (million tonnes) under preferred approach (taking the 10-year average and applying a 2% growth rate thereafter) for the remaining plan period 2019-2030

Year	Sand and Gravel	Crushed Rock
2018 baseline	0.266	0.596
2019	0.271	0.608
2020	0.277	0.620
2021	0.282	0.632
2022	0.288	0.645
2023	0.294	0.658
2024	0.300	0.671
2025	0.306	0.685
2026	0.312	0.698
2027	0.318	0.712
2028	0.324	0.727
2029	0.331	0.741
2030	0.337	0.756

Table F: Forecast of aggregate sales (million tonnes) if preferred growth rate (2% pa) is applied to the 3-year sales average for the remaining plan period 2019-2030

Year	Sand and Gravel	Crushed Rock
2018 baseline	0.260	0.767
2019	0.265	0.782
2020	0.271	0.798
2021	0.276	0.814
2022	0.281	0.830
2023	0.287	0.846
2024	0.293	0.863
2025	0.299	0.881
2026	0.305	0.898
2027	0.311	0.916
2028	0.317	0.935
2029	0.323	0.953
2030	0.330	0.972

8. Appendix B – Duty to Cooperate

Local Aggregates Assessment Duty to Co-operate Record 2019

Based on the AM Report 2014, an assessment was made of where imports to the North West were coming from. As this information is not disaggregated into sub-regions within the NW, and given that the Greater Manchester, Merseyside and Halton and Warrington sub-regional area has the largest population in the NW, it was assumed that a significant proportion of the imported aggregate materials final destination was the sub-region.

Likewise, although the AM Report indicates which regions the exported material came from, it is not easy to determine exactly which county area within each region the material was sourced. Therefore, Duty to Co-operate requests were sent to all the potential local authority areas. The only exception to this was the London Boroughs. Greater London, like our sub-region is likely to have a high demand for aggregates but a shortfall of supply from land-won sources, therefore, it was considered unlikely that any aggregate materials received in the sub-region would have derived from London. Requests were therefore, not sent to London Boroughs. The letter was sent out 21st May 2020 with a four-week response date.

The letter provided background detail to the aggregate position in GMMH&W, and posed the following questions:

As part of ongoing discussions and cooperation on this matter, I would be grateful for your views regarding:

- *Do the ongoing aggregate movements to our LAA area cause an issue that requires further discussions in the context of LAA for your sub-region, particularly in terms of supply and landbank issues? If so, what do these discussions need to have regard to?*

- *Given that there are no sand and gravel applications in the pipeline within our LAA area, do you have any suggestions as to how we should address the shortfall of supply in our sub-region?*

The Table below shows the requests and responses received, and how the sub-region proposes to respond to the comments received.

Borough/County Council and Contact details	Details of Consultation Response received	Proposed sub-regional response to comments
South East Region (movements of sand and gravel)		
West Berkshire County Council mwdpd@westberks.gov.uk	I can't speak for the wider south east, but as West Berkshire doesn't export/import significant levels of mineral from the Greater Manchester area, if any. So, I don't expect our mineral landbank nor supply to be affected. In terms of rectifying a shortfall in supply, I would suggest that if local operators don't take advantage of this then a partial review of your M&W plan may help. This could identify new sites and preferred areas of extraction, to encourage landowners to bring sites forward. You may also wish to obtain MoUs from MPA's that do supply mineral to your area.	No further consultation needed. Potential suggestions not completely relevant given that the LAA operates over 17 administrative boundaries.
Central & Eastern Berkshire Authorities Berks.consult@hants.gov.uk	The data from The Aggregates Monitoring Survey 2014 shows no movement of Sand and Gravel from the Central and Eastern Berkshire Authorities to the Greater Manchester, Merseyside and Halton, and Warrington area, as such we do not consider there to be any issues with regard to supply or landbank under the current situation.	No further consultation needed.
Buckinghamshire CC mineralswastepolicy@buckscc.gov.uk	No response received.	No action
Hampshire CC planning@hants.gov.uk Kent CC	The data from The Aggregates Monitoring Survey 2014 shows no movement of Sand and Gravel from Hampshire to the Greater Manchester, Merseyside and Halton, and Warrington area, as such we do not consider there to be any issues with regard to supply or landbank under the current situation.	No further consultation needed.

	There are a couple of possible options to address the shortage of Sand and Gravel in the sub region within a future plan review: • One such option is to revaluate the previous area of search policy; this may be difficult considering the scale of resources actually available within the sub region. • Another method is by strengthening the safeguarding of aggregate logistics infrastructure such as Wharves and Rail Depots to prevent loss of capacity for aggregate importation to address the lack of supply from within the sub region.	First option, not particularly relevant given the availability across the sub-region Ensuring safeguarding of aggregate logistics infrastructure is relevant and already listed as an action in the LAA
Medway Council Planning.policy@medway.gov.uk	No response received	No action
Milton Keynes Council customerservices@milton-keynes.gov.uk	No response received	No action
Oxfordshire CC Minerals and wasteplanconsultation@oxfordshire.gov.uk	No response received	No action
Surrey CC mdf@surreycc.gov.uk	Due to geographical proximities between our region and yours, we do not anticipate any major issues presented by what has been put forward in your LAA. The data shows that the North West is a net exporter of sand and gravel. This is a mineral which is becoming more constrained in our region over the forthcoming years. Further, only a relatively low amount of sand and gravel is imported into your region from the South East (12,000 tonnes in 2014), and very little if any crushed rock is imported into your region from the South East. We would suggest looking at all available options open to your region. The continued use of the Managed Aggregates Supply System would be important. Further, addressing the shortfall through other practices such as a possible increase in imports along with the	No further consultation needed. Increasing imports seems unlikely as a number of areas have constrained resources. Increasing supply from

	expansion of use of secondary and recycled aggregates would be the primary methods to examine.	recycled and secondary aggregates is more likely appropriate in our subregion.
West Sussex CC mwdf@westsussex.gov.uk	The AM2014 data is the most up to date aggregate movement data. Although there are recorded movements from the South East to your LAA area in 2014, for West Sussex, there were no recorded movements to your area. Should any future survey indicate that movements are taking place from West Sussex to your area, then these would be captured via our future LAAs. At this time, there is no need for further discussions between our authority areas. This may not be the case for the other Mineral Planning Authorities in the South East that are supplying your area. The approach taken in West Sussex, when considering how to address the shortfall for aggregates, has firstly been to undertake a call for sites process, targeting landowners and the minerals industry, whom are best placed to promote sites that may be viable. Further, continued dialogue with the relevant aggregate working party, and those authorities that currently have supplies that are serving your area should be undertaken to ensure that the wider needs can continue to be met. A site search could be undertaken, whereby BGS data is analysed, and any locations where there may be sand and gravel are explored, to ascertain whether any potential allocations or areas of search exist in your plan area.	No further consultation needed. Call for sites in Greater Manchester and Warrington was not successful. Minerals industry is not particularly interested in the sub-region. Alternative sources of sand and gravel are more likely.
East Midlands Region (movements of sand and gravel, limestone and igneous rock)		
Derbyshire CC etewastemin@derbyshire.gov.uk	No response received	Consultation as part of LAA 2019.
Leicestershire CC planningcontrol@leics.gov.uk	The Authority requested distribution data from 2018 from all mineral operators working within Leicestershire to provide an up to date understanding of the role that Leicestershire plays in supplying aggregates since the last national aggregate minerals survey was undertaken in 2014, over four years ago. Unfortunately, the Authority were not able to obtain all of the sales by destination distribution data for crushed rock from the operators as some of the operators did not have the systems in place to obtain the information requested. Without obtaining the distribution data from all the operators, the data which has been collected is therefore not representative. Therefore, the most recent data from the latest national aggregate minerals survey in 2014 has been used in providing this response.	Continue to consult as crushed rock is supplied.

	The distribution of crushed rock from Leicestershire in 2014 indicates that 2.3% of crushed rock produced in Leicestershire was exported to the north-west region, 90% of which travelled by rail. The Leicestershire Minerals and Waste Local Plan adopted 2019, supplemented by data in the most recent Local Aggregate Assessment produced by Leicestershire (January 2020) indicates there would be more than sufficient crushed rock reserves to meet the projected requirements up to 2031. It is therefore not considered that there would be any issues in terms of landbank or supplying mineral to the region, including by rail. Please note that our most recent LAA as published on our website contains a further analysis of the medium to long term hard rock landbank from those four sites in Leicestershire which are rail linked. Given the supply to the region, please continue to consult Leicestershire on future documents.	
Lincolnshire CC Dev_planningsupport@lincolnshire.gov.uk	No response received	No action
Northamptonshire CC Planning@northamptonshire.gov.uk	No response received	No action
Nottinghamshire CC Planning.policy@nottscc.gov.uk	No response received	No action
Peak District National Park	Our most recent LAA with Derbyshire County Council and Derby City Council (2019) sets out our joint approach to apportionment to reflect this policy position, such that the National Park's provision figure is reduced by 10% with a compensatory equivalent increase to Derbyshire County Council's figure. The current LAA apportionment figure is therefore 12.46 million tonnes per annum (9.26 mtpa for Derbyshire and 3.20 mtpa for the PDNP). There are currently no indications to suggest that production will not continue around this rate for the foreseeable future. However, production of aggregate crushed rock will continue to be monitored on an annual basis and, along with other factors such as the NPPF requirement to maintain landbanks outside National Parks, will inform the review of provision rate figures in future LAAs. In the context of your request, we would like to take this opportunity to re-emphasise this	This will be reflected in our LAA

	maintained policy position of a progressive reduction in the amount and proportion of aggregates from the Peak District National Park and the continuing compensatory approach with Derbyshire County Council, which is consistent with the National Planning Policy Framework paragraph 205 which seeks, as far as is practical, to provide for the maintenance of landbanks for non-energy minerals outside National Park and other protected areas. On the matter of the second question relating to sand and gravel applications, we have no comment to make, given that there are no sand and gravel resources with the National Park.	
Rutland CC ldf@rutland.gov.uk	No response received	No action
West Midlands Region (movements of limestone, sandstone and igneous rock)		
Herefordshire CC ldf@herefordshire.gov.uk	No response received	No action
Shropshire CC Planning.policy@shropshire.gov.uk	No response received	No action
Solihull MBC psp@solihull.gov.uk	No response received	No action
Staffordshire CC planning@staffordshire.gov.uk	No response received	No action
Warwickshire CC	No response received	No action

tonylyons@warwickshire.gov.uk		
Worcestershire CC minerals@worcestershire.gov.uk	No response received	No action
Birmingham City Council Planning.strategy@birmingham.gov.uk	No response received	No action
Black Country Core Strategy Planningpolicy@walsall.gov.uk	The 4 Black Country authority areas (Dudley, Sandwell, Walsall, Wolverhampton) have not produced any primary aggregates in terms of rock for many years (including such as sandstone, limestone and igneous rock as you identify in your letter). Walsall borough produced primary aggregates as sand and or gravel in relatively recent times, but this reduced significantly following the closure of the former Aldridge Quarry in 2008 and ceased completely when Branton Hill Quarry closed in 2013. Dudley and the Black Country is therefore and at present wholly reliant on importing primary aggregates from other Minerals Planning Authority (MPA) areas within the West and East Midlands, notably: Crushed Rock: Leicestershire, Derbyshire (including Derby City and the Peak District National Park), Shropshire; Sand and Gravel: Staffordshire, Warwickshire, Solihull (possibly also Worcestershire, who's emerging Minerals Local Plan identifies preferred sand and gravel supply areas in the north of the county, which may have potential to supply the Black Country). Clearly and unfortunately therefore, Dudley Borough (and the wider Black Country) is not in a position to be able to contribute towards the Minerals Planning Authorities of Greater Manchester, Merseyside and Halton and Warrington's shortfall in terms of rock and sand and gravel.	No further consultation needed.

	Further, it would be of concern if levels of primary aggregates imported into Dudley and the wider Black Country were to be adversely affected in the event of the various above identified MPAs (as may be relevant) increasing their exports to your sub-region.	
Yorkshire and Humber Region (movements of sand and gravel, limestone and sandstone)		
Doncaster MBC localplan@doncaster.gov.uk	The 2014 National Monitoring and identified that Doncaster exported 1 to 10% of Manchester, Merseyside, Halton and Warrington's total consumption of sand and gravel for that year. This equates to between 3,000 and 30,000 tonnes of material to this area. With regards to crushed rock Doncaster exported less than 1% of the total consumption for this area. We do no perceive these values to be a strategic quantity of material. It is difficult to answer the question based on what we now perceive to be out of date information, although we acknowledge this is the only information available. Doncaster has its own supply and landbank issues (for sand and gravel, but not crushed rock) regardless of who we export to. The vast majority of the material produced in Doncaster stays in South Yorkshire and West Yorkshire, with smaller amounts exported elsewhere. So, the small amount of mineral for your area is considered immaterial at this level. We have a Duty to Cooperate Statement with (who we perceive to be) the relevant authorities and we are in the process of getting final signatories for as evidence for our local plan. (They have all agreed to sign the document.) This document can be found here… https://dmbcwebstolive01.blob.core.windows.net/media/Default/Planning/Documents/Local%20Plan/Submission/Main%20Docs/CSD13%20-%20Statement%20of%20Common%20Ground.pdf Paragraphs 83 onward and agreement 19 specifically relates to minerals. You may find it useful when looking at your own minerals work. I don't believe we need to engage in any further discussions with regards to material supply or landbank issues. I am firmly of the opinion, that this should be taken more seriously at national government level and this is regularly discussed at our aggregates working party meetings. I am at a loss as to how you should address your shortfall in supply, South and West Yorkshire's shortfall in supply is currently being propped up by Nottinghamshire County Council, but this is a finite short to medium term option which we are all mutually aware of. You may need to look at the option of another area to supply your material. Also, if this piece of work is to contribute toward your local plan, I would also suggest producing an	No further consultation needed. May require consideration of an update to evidence base across each of the areas to inform future LAAs.

	aggregate forecasting evidence base paper too, which will help identify the mineral demand over the plan period.	
East Riding of York Council Forwardplanning@eastriding.gov.uk	No response received	No action
North Lincolnshire Council localplan@northlincs.gov.uk	No response received	No action
North Yorkshire CC, City of York and North York Moors National Park mwjointplan@northyorks.gov.uk	No response received	No action
Yorkshire Dales National Park planning@yorkshiredales.gov.uk	Comments relate only to exports of aggregate from quarries in the Yorkshire Dales National Park. There are significant tonnages of Carboniferous Limestone and high PSV gritstone supplied from quarries in the National Park to Greater Manchester, Lancashire and other parts of the NW. Increasing proportions are moved by rail to a number of rail depots. I am working from home and don't have access to detailed figures at the moment. This movement of aggregate from YDNP to the NW is part of a long-standing pattern and I don't think there are any issues requiring further discussion. There aren't any sand and gravel quarries in the National Park.	No further consultation required. However, need to be mindful of supplies in the long term.
North East Region (movements of limestone)		
Durham CC planning@durham.gov.uk	Regarding point 1, it is considered that the continued movement or sales of crushed rock aggregate from County Durham to your LAA area at 2014 levels would not require a discussion in terms of either supply or landbank issues. As detailed in Table 9i 'Sales of primary aggregates by MPA and principal destination sub-region in 2014: North East' (Collation of the results of the 2014 Aggregate Minerals survey for England and Wales) only 16% or 417,000 tonnes of crushed rock, from an overall total production of 2,655,000 tonnes in 2014, was exported from County Durham to locations outside of the North East.	No further consultation required.

	It is understood that the majority of these exports were to surrounding regions and in particularly to North Yorkshire in the Yorkshire and Humber region, with only a small quantity of limestone exported to Greater Manchester, Merseyside and Halton and Warrington. That on the basis that no sand and gravel was exported to your LAA area in 2014, and there is no later information currently available to show a supply relationship between our LAA areas, that the council does not consider it appropriate or necessary to offer a view on how supply shortfalls in your sub-region should be addressed at this time. Once the results of the National Aggregates Survey 2019 become available, should a more up to date answer be sought to these questions, the council would be willing to respond to these questions on the basis of last year's (2019) sales information.	
Tees Valley MWDF (including Hartlepool, Middlesbrough, Stockton on Tees, Darlington, Redcar, Cleveland) planningpolicy@hartlepool.gov.uk	No response received	No action
Northumberland CC Planningstrategy@northumberland.gov.uk	We are aware that the data from the 2014 aggregate minerals survey shows movements of crushed rock for aggregate uses into Greater Manchester, Merseyside and Halton and Warrington from Northumberland. However, our analysis indicates that the movements are from Northumberland National Park rather than from the area covered by Northumberland County Council in its role as the Mineral Planning Authority. The movements originate from Harden Quarry in the Northumberland National Park and our analysis of the data suggests that the movements into Greater Manchester, Merseyside and Halton and Warrington are small-scale when compared to other movements. Harden Quarry extracts an igneous rock resource (an intrusion of mica-porphyrite) to produce a crushed rock aggregate that is valued for its red colour. Due to the limited occurrence of this resource it is generally supplied over a wider geographical area compared to other quarries in Northumberland.	No further consultation required.

	Given the movements are likely to originate from a quarry in the Northumberland National Park and not from the area covered by Northumberland County Council in its role as Mineral Planning Authority, we do not consider that this raises any strategic planning issues between Northumberland County Council and the Councils of Greater Manchester, Merseyside and Halton and Warrington that require discussion under the Duty to Cooperate. As at 31 December 2018 Northumberland currently had a landbank of sand and gravel reserves for aggregate uses of 12.2 years. The emerging Northumberland Local Plan, which is currently undergoing examination, is looking to allocate sites to maintain a landbank of at least seven years to the end of the plan period in 2036 and ensure there is capacity to meet the calculated demand. The approach takes account of movements to other Mineral Planning Authority areas, but the capacity of the current sites and the proposed allocations means Northumberland is unlikely to be able to significantly increase in supply above the current forecast demand. In this context, it therefore seems unlikely that sites in Northumberland would be able to help address the sand and gravel shortfall in Greater Manchester, Merseyside and Halton and Warrington.	Unlikely that increases in imports from Northumberland CC will assist in sand and gravel supply.
North Tyneside	No minerals extracted; marine won only. No DtC request sent.	No action
South Tyneside BC localplan@southtyneside@gov.uk	No response received	No action
Northumberland National Park wmpaldf@hotmail.co.uk	No further mineral extraction permitted.	No action
Newcastle City Council planningpolicy@newcastle.gov.uk	No response received	No action
South Wales (movements of sand and gravel, sandstone, limestone and igneous rock)		
Brecon Beacons National Park	No response received	No action

Planning.enquiries@beacons-npa.gov.uk		
Caerphilly CBC mullii@caerphilly.gov.uk	No response received	No action
City of Cardiff Council No contact details found	No consultation sent.	No action
Ceredigion CC ldp@ceredigion.gov.uk	There are no known exports of land won sand and gravel from the South Wales Region into the North West of England. In terms of crushed rock there are some sales from South Wales into the North West Region, but it is very unlikely that any of that rock comes from Ceredigion.	No further consultation needed.
Neath Port Talbot CBC ldf@ceredigion.gov.uk	No response received	No action
Pembrokeshire and Carmarthenshire CC forwardplanning@carmarthenshire.gov.uk	No response received	No action
Powys CC ldp@powys.gov.uk	No response received	No action
Rhondda Cynon Taff CBC ldp@rhondda-cynon-taff.gov.uk	No response received	No action
Swansea City Council	No response received	No action

planning@swansea.gov.uk		
Monmouthshire CC planningpolicy@monmouthshire.gov.uk	No response received	No action
Glamorgan CBC planning@valeofglamorgan.gov.uk	No response received	No action
Newport City Council Ldp.consultation@newport.gov.uk	No response received	No action
Merthyr Tydfil CBC planning@merthyr.gov.uk	No response received	No action
Blaenau Gwent CBC planning@blaenau-gwent.gov.uk	No response received	No action
North Wales (movements of sand and gravel, limestone, sandstone and igneous rock)		
North Wales North Wales Minerals and Waste Planning Service covering Conwy, Flintshire, Gwynedd, Isle of Anglesey, Wrexham, Denbighshire and Snowdonia National Park.	No response received	Formal consultation through LAA 2019 consultation via NW AWP.

Scotland (Igneous rock from Glensanda)		
Argyll and Bute Council (location of Glensanda super quarry) ldp@argyll-bute.gov.uk	No response received	Formal consultation through LAA 2019 consultation via NW AWP.
North West Region		
Cheshire East Council	Addressing point, CEC latest 2019 LAA (using 2018 data) identifies an aggregate sand and gravel landbank of 4.87 years at 31st December 2018. This is less than the at least 7 years required by national planning policy and guidance. These factors mean that it is challenging for the Council to plan to meet its own aggregate apportionment requirements through the MWDPD. No account has so far been taken of meeting any aggregate apportionment shortfalls of other areas which would further complicate matters. If it is your sub-region's intention that some of your aggregate apportionment shortfall be met by Cheshire East, then the Council would need to understand how much this would likely be for the MWDPD plan period and beyond. This information would need to be made available as soon as possible so we can consider whether this would be achievable as we prepare the draft plan, together with a more detailed justification of why this was necessary and the steps your sub-region had undertaken to try and meet its apportionment requirements. With regard to second point, could the shortfall in supply be better addressed by a more sub-regional approach to understanding and addressing the issue? Is there any scope to do some more detailed work on understanding the extent to which there remains opportunities for the viable extraction of aggregate within your sub-region? The current policy position seems to be supportive but passive towards new aggregate opportunities, would there be any benefit in undertaking a co-ordinated sub-regional call for sites exercise for minerals in these areas in the near future to confirm an up to date lack of industry interest? … a more co-ordinated approach would better tie in with the sub-regional approach to apportionment and monitoring. If nothing else this additional work would justify the sub-regions position (in its LAA and at individual plan examinations) and assist future DtC discussions with those councils that supply aggregate to the sub-region. Other than that, your existing approach of developing measures to increase aggregate from marine dredged, secondary and recycled aggregates is a sound one, provided you are able to demonstrate a suitably robust and up to date evidence base for these sources.	Formal consultation through LAA 2019 consultation via NW AWP. There is difficulty in working across 17 administrative areas in terms of coordinating more detailed work, although, potentially this is something that could be considered. However, there seems little appetite from minerals operators in the sub-region.

		Pursuing a joint meeting on marine aggregates across the NW may be more appropriate in terms of understanding this supply route.
Cheshire West and Chester Council	Cheshire West and Chester (CWaC) do not have any crushed rock quarries in our borough and as such, we do not have any relationship with the Greater Manchester, Merseyside, Halton and Warrington area in terms of supply of crushed rock aggregate. We do not import crushed rock aggregate from your area either. In terms of aggregate sand and gravel, our Local Aggregate Assessment (LAA) 2019 (which covers the period from 1 January to 31 December 2018) identifies that Greater Manchester, Merseyside, Halton and Warrington were the largest consumers of sand and gravel from Cheshire West, after the Cheshire county area. 21% of overall 2018 sales from CWaC went to Greater Manchester, Merseyside, Halton and Warrington. Sales to your area have reduced slightly compared to 2017 (when it was 27% of overall sales), but there is still a very significant relationship between supply in CWaC and demand in your area. According to the 2014 Aggregate Minerals Survey (BGS), 1-10% of the total sand and gravel consumed in Cheshire (not CWaC specifically) came from Liverpool City Council area and less than 1% came from Salford City Council area. This indicates that we have also received sand and gravel from your area, however due to the lack of up-to-date information, it is not clear whether imports of sand and gravel into CWaC are still occurring. The MHCLG national minerals survey that is expected to begin shortly would provide additional information on this issue. According to our Local Aggregate Assessment (2019), CWaC had a landbank of 9.81 years based on 10-year average sales, and 7.24 years based on the annual apportionment figure. We have not yet begun preparation of the 2020 LAA due to the delay with the MHCLG national aggregate monitoring and as such, I am not sure how the landbank position has changed. We have a current application pending for 350,000 tonnes of additional aggregate sand and if that was approved it would increase the landbank. However, we would still only have around a 7-8-year landbank based on a continuation of previous sales figures, which would not give much flexibility to increase exports significantly to your area.	Formal consultation through LAA 2019 consultation via NW AWP.

	To be able to identify whether ongoing aggregate movements are likely to cause an issue we would need to understand what your current landbank / supply situation is and how much you expect your import requirements to increase over time. Your latest LAA is for 2018 (using 2017) data, which is therefore slightly out of date. It would be helpful to understand what the position was in 2019 and how this is expected to increase (based on quarry end dates, extraction rates and estimates of future demand). Overall, the ongoing aggregate movements to your LAA area could potentially cause an issue that requires further discussions in the context of our LAA and our aggregate landbank position. To be able to understand the issues and whether anticipated additional demands from your area are likely to cause supply / landbank issues in CWaC depends upon the current needs and anticipated future needs. It also depends upon whether you are able to increase provision from marine / recycled / secondary aggregate sources, what the remaining requirements are likely to be, what the supply position is in the other areas that supply you with aggregates, what percentage of the requirements you are likely to require from CWaC and how the demands are likely to increase over time. It also depends upon the current landbank position in CWaC, which we cannot identify at the moment due to the delay in the MHCLG survey and the recommendation from Government that local authorities do not undertake their own monitoring. Future discussions would need to have regard to all of these issues. The shortfall of supply in your sub-region could potentially be addressed, at least in part, by marine aggregate provision or additional use of secondary and recycled aggregates. Have all options for new quarries / extensions to existing quarries been considered / discounted? Are there workable and viable deposits in your area? What is the view of the operators on this? All options for provision within your area should be investigated before increasing demands from other areas. The lack of supply appears to be a wider issue for the whole of the north west region, rather than just the sub-region. As such, it may be necessary to consider the issue at a wider geographical scale.	The LAA 2019 includes a more thorough assessment of both housing and economic growth to enable an increased understanding of likely aggregate needs going forward. It is intended to convene a meeting to discuss future supplies from marine sources with the Crown Estate and it is suggested that this could be NW wide discussion. Whilst not all options for new quarries/extensions have been completely exhausted, there is little commercial appetite for further exploration. More detailed work on recycled/secondary aggregates is needed to identify if this can assist in meeting demand.

Cumbria County Council	Exporting of crushed rock (limestone and sandstone) to the MPAs in your sub-region does not cause an issue that requires further discussion. The Cumbria and Lake District LAA 2019 confirms based on 2018 sales and reserves that we have more than adequate permitted reserves - sandstone & igneous (excluding high specification aggregates) over 57 years; limestone (excluding high specification aggregates) over 40 years. However, the 2019 LAA confirms that our current permitted reserves of land-won sand and gravel for aggregate use are not sufficient to maintain the required landbank of at least 7 years throughout the Plan periods (2030 and 2035). The LAA provision is based on 3-year average sales figures (0.77Mt) giving a landbank of 9.43 years which would run out in 2027. In order to ensure permitted reserves, remain above the "at least" 7 years landbank required by the NPPF, new reserves need to come on stream no later than 2020. Like you, we have not received any planning applications for new sand and gravel reserves and no proposals have come forward on the Site Allocations for sand and gravel within our adopted Cumbria Minerals and Waste Local Plan (2017) – we have allocated 5 Areas of Search and 1 Preferred Area. In terms of how the shortfall of sand and gravel supply can be addressed (and we know this is an issue for other MPAs in the North West too) we have identified the role of marine dredged aggregates as an alternative supply. However, in 2018 there was zero marine-dredged sand and gravel landings recorded for Cumbria. On enquiring to the Crown Estate whether there is any issue affecting the declining (and now absent) amount of marine-dredged aggregate we were advised that there is sufficient vessel capacity and licensed material in the region to re-establish supply if market conditions provide sufficient economic demand. I am led to believe by operators that the cost associated with extracting marine-dredged aggregates under licence from Crown Estate is prohibitive meaning it is not financially viable. Perhaps some combined research amongst MPAs in the North West to establish what is preventing this resource being better utilised would be of benefit going forward, given the acknowledged shortfall in land-won reserves. The role of recycled aggregates from inert waste is also important and we are hoping to monitor this more closely within our own future LAAs. In Cumbria we are seeing a number of applications at existing operating quarries for importation of inert waste to produced recycled aggregate. Whilst this activity is not limited only to operating quarries, I expect having a significant number of such sites is a factor in the capacity or potential for increasing the amount of recycled aggregate	Formal consultation through LAA 2019 consultation via NW AWP. It is intended to convene a meeting to discuss future supplies from marine sources with the Crown Estate and it is suggested that this could be NW wide discussion. The dedicated dredger is a relatively recent addition to the NW, and hopefully this will be reflected in the National AM survey results. More detailed work on recycled/secondary aggregates is needed to identify if this can assist in meeting demand.

Lancashire County Council	We have previously engaged in discussions on aggregate supply (one that we have both identified as a strategic issue and so falling under the duty to cooperate). In particular we have provided comments directly to you, and through the North West Aggregate Working Party, during the drafting and sign off of the Greater Manchester, Merseyside and Warrington Local Aggregate Assessment 2019 (2017 data). In these comments we identified the lack of a robust estimate of need as being of concern. In your letter of 20 May you state there are or soon will be issues with your landbank for both sand and gravel and crushed rock, and that there are significant movements of aggregates from Lancashire to the sub-region. You go on to ask 2 questions pertaining to these issues. I reply to these in order below. *Is there an issue with the ongoing movements of aggregates from Lancashire to the sub-region?* There is no issue, per se, with the movement of aggregates from Lancashire to the sub-region; the operation of businesses, and the movement of people and materials, across local authority administrative boundaries is to be expected and often encouraged. We also recognise that there may be issues in maintaining a sufficient permitted reserve within the sub-region due to the availability of unconstrained resources or other unrelated economic issues. Provided these matters do not result in the absence of a suitably positive policy on need and provision within a local plan, and any sites that are proposed are not discounted unreasonably, there is no issue. The Joint Lancashire Local Aggregate Assessment uses a 3- or 10-year average of sales, and other relevant local information, to forecast anticipated demand over the next 15 years. This will include current exports. However, if you are anticipating reserves within the sub-region to be reducing over that time, or demand within the sub-region to be increasing over that time, then (as set out in our comments on your most recent Local Aggregate Assessment) this should be quantified in the sub-regions local aggregate assessment, and included and considered in the North West Aggregate Working Party's Annual Monitoring Report. This potential additional need can then properly be assessed through our local plan review process, taking onto account the implications upon the permitted reserves, and future anticipated needs set out in the Joint Lancashire Local Aggregate Assessment. Without this information we cannot fully answer your question.	Formal consultation through LAA 2019 consultation via NW AWP. The LAA 2019 includes a more thorough assessment of both housing and economic growth to enable an increased understanding of likely aggregate needs going forward.

	Do we have any suggestions as to how to address the shortfall in supply of sand and gravel in the sub-region? The first step in this process must be identifying what the shortfall is, before any formal approach is made to neighbouring authorities regarding the distribution of unmet needs.	

9. Glossary

Term	Acronym	Definition
Active Permissions		Sites with valid permissions which may be working or mothballed on a temporary basis (and for which new working and reclamation schemes are not required before working can recommence)
Association of Greater Manchester Authorities	AGMA	AGMA is the local government association for Greater Manchester. It represents the ten district councils of Greater Manchester (Manchester, Bolton, Bury, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan); developing policy, lobbying government and others, and running a range of services. In this capacity, AGMA directs the strategic public and social services of Greater Manchester on behalf of its ten metropolitan boroughs and the Greater Manchester Integrated Transport Authority, the Greater Manchester Police Authority, the Greater Manchester Fire and Civil Defence Authority and the Greater Manchester Waste Disposal Authority, who are all members by subscription.
Aggregate Minerals		Defined in Technical Guidance to the National Planning Policy Framework (DCLG, Mar 2012) (Paragraph 54) as sand and gravel, and crushed rock. Generally, they are used in the construction industry for purposes of making concrete, mortar, asphalt or for roadstone, drainage or bulk filling.
Aggregate Reserves		The amount of crushed rock or sand and gravel which is covered under planning permissions for working but is still to be extracted.
Aggregate Resources		Deposits of crushed rock and sand and gravel which are known to be present in the ground.
Aggregate Sales		The amount of an aggregate (crushed rock, sand & gravel, secondary or recycled) sold in a set period of time.
Aggregate Working Party	AWP	The AWP is a technical working group with membership drawn from mineral planning authorities, the minerals industry and Department for Communities and Local Government (DCLG).
Construction, Demolition and Excavation Waste	CD&E	Waste arising from site construction or refurbishment, demolition or excavation.
Core Strategy		Document setting out the long-term spatial vision for the local planning authority area, the spatial objectives and strategic policies to deliver that vision. The Core Strategy has the status of a *Development Plan Document* (PPS12 definition).
Crushed Rock		Hard rock (such as limestone) which has been quarried, fragmented and graded for use as aggregate.
Department of Communities and Local Government	DCLG	The Government department responsible for planning and local government. Now the Ministry of Housing, Communities and Local Government (MHCLG).
Dormant Site		Dormant sites are those sites which were granted planning permission after 21 July 1943 and before 1 July 1948, but in which no substantial mineral working has been carried out between 1 May 1989 and 30 April 1991.

Term	Acronym	Definition
Duty to Co-operate	DtC	Requirement in the NPPF for Planning Authorities to address strategic issues in conjunction with neighbouring authorities who must deal with the same issues.
Examination in Public	EIP	The process of determining whether a Development Plan Document meets the requirements of the relevant legislation and is 'sound'. Soundness is tested by considering whether the DPD is justified; effective and consistent with national policy. As part of that process the Inspector (appointed by the Secretary of State) will consider representations made on the soundness of the DPD by interested parties such as local residents and developers. At the end of the examination the Inspector will issue a report to the Local Planning Authority (LPA). The report will contain recommendations relating to any changes that need to be made to the DPD, to ensure it is sound, before being formally adopted. The recommendations will be binding if the LPA chooses to adopt the DPD that has been examined.
Extant Permission		Existing planning permission.
Inactive Site		Minerals extraction site with planning permission but where no extraction is currently taking place.
Landbank		The sum in tonnes of all permitted reserves for which valid planning permissions are extant. This includes current non-working sites but excludes dormant sites and 'inactive sites. They are a monitoring tool to provide MPA's with early warning of possible disruption to the provision of an adequate and steady supply of land-won aggregate in their area.
Licenced Marine Aggregate Dredging Areas		Areas allocated under the sea where dredging can take place with the permission of the Marine Management Organisation.
Local Aggregate Assessment	LAA	A report prepared by a Mineral Planning Authority or group of Authorities which assesses the demand for and supply of aggregates now and in the future.
Local Development Framework	LDF	The folder of documents which contains all of a local authority's local development documents (including Local Plan documents, Local Development Schemes, Statements of Community Involvement and Supplementary Planning Documents).
Local Development Scheme	LDS	Document setting out the programme for preparing *Local Development Documents* (PPS12 definition).
Local Plan		The NPPF defines a Local Plan as the plan development of an area, drawn up by the local planning authority. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. Current Core Strategies and other planning policies, which under the regulations would be development plan documents, form part of the Local Plan. The term includes old policies which have been saved under the 2004 Act.
Marine dredged sand and gravel		Sand and gravel excavated from the sea by dredging.
Merseyside Environmental Advisory Service	MEAS	Merseyside Environmental Advisory Service is a sub-regional service that works for Halton, Knowsley, Liverpool, Sefton, St. Helens and Wirral Councils. The service is provided by professional technical staff and its role is to

Term	Acronym	Definition
		assist the Merseyside Districts by providing technical advice on a wide range of environmental matters, primarily to the Planning Services of the Councils.
Mineral Planning Authority	MPA	The planning authority responsible for the control of mineral extraction and waste management development, through forward planning, determining of planning applications, monitoring and enforcement.
Mineral Safeguarding Areas	MSA	An area designated by Mineral Planning Authorities which covers known deposits of minerals which are of sufficient economic value to warrant protection from unnecessary sterilisation by non-mineral development.
Ministry of Housing, Communities and Local Government	MHCLG	Formerly the Department for Communities and Local Government (DCLG).
National Planning Policy Framework	NPPF	The document that sets out the Government's planning policies for England and how they are expected to be applied. It provides guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.
Primary Aggregate		Crushed rock and sand and gravel, which is extracted directly from the ground.
Recycled Aggregate		Material sourced from construction and demolition waste, highway maintenance waste and excavation and utility operations and then reused as aggregate.
Sand and gravel		Rock which nature has already broken into fragments mostly by weathering and by erosion during the ice age.
Secondary Aggregate		Derived from a range of materials which may be used as aggregate, including power station ash and colliery spoil.
Sub-regional Apportionment		The splitting of regional supply guidelines for aggregate minerals between planning authorities or sub regions.

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