North Lincolnshire Local Plan (2020 to 2038)

Minerals Apportionment Background Paper

Updated March 2022

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Contents

1. INTRODUCTION & BACKGROUND

1.1 Minerals play a vital role in society. Aggregates and other types of construction minerals are needed to build homes, factories, offices and transport infrastructure. Other minerals are used in industry, food production and agriculture. Energy minerals like oil and gas provide the country with power and heating. It is therefore important for development and for our quality of life as well as creation of sustainable communities that we plan appropriately for minerals. Mineral planning ensures that the need for minerals by society and the economy, and the impacts of extraction and processing on communities and the environment, are managed in an integrated way.

1.2 North Lincolnshire Council (NLC) is the mineral planning authority (MPA) for its area. This means it is responsible for creating a planning policy framework for minerals, including their safeguarding, and making decisions on proposals for minerals development. NLC is preparing a new Local Plan, covering the period 2020 to 2038, that will replace the existing documents that make up the Local Development Framework and the saved policies of the North Lincolnshire Local Plan (May 2003). The new plan will set out up to date planning policies for minerals, including those necessary for maintaining a steady and adequate supply of aggregates.

1.3 This paper has been updated to support the Local Plan submission, in respect of its approach to aggregate supply. To comply with the National Planning Policy Framework (NPPF) mineral planning authorities have a requirement to make provision for an adequate supply of aggregates, which means providing land banks of at least 10 years for crushed rock and 7 years for sand and gravel over the Plan period to 2038.

2. NORTH LINCOLNSHIRE'S AGGREGATE RESOURCES

2.1 North Lincolnshire's mineral resources are a reflection of its geological, economic and social history. The solid geology of North Lincolnshire is relatively simple consisting almost entirely of Jurassic and Cretaceous rocks that dip regularly eastwards in continuous belts from north to south. The topography presents a correspondingly simple and regular arrangement, the limestone and chalk standing out as the west facing escarpments of the Lincolnshire Wolds and the Lincoln Edge, separated by valleys underlain by Jurassic clays.

2.2 Exposures of the solid geology in the area occur mainly in the upland areas of the Lincolnshire Wolds and around the Scunthorpe area. The remainder of the area is overlain extensively with drift deposits consisting mainly of alluvium, peat, blown sands and boulder clay. Chalk of the Upper Cretaceous period underlies much of the area to the east and outcrops of Jurassic limestone occur to the south of Scunthorpe. To the north are outcrops of the Frodingham Ironstone. Further west in the Trent Valley layers of Quaternary deposits are underlain by Mercia Mudstone. Blown sands are found in the areas around Messingham and Manton.

2.3 Much of the solid rock of North Lincolnshire is however overlain by glacial deposits of boulder clays, sands and gravels that add complexity to the overall picture and contribute local variation in landscape character. Extensive deposits of sands and gravels, so called cover sands, which derive from Bunter Sandstones further west beyond the Trent, have been blown in an easterly direction across the landscape to build up against the west facing escarpments and the area of Mercia Mudstones that forms the Isle of Axholme. To the north, the Humber has cut through the Cretaceous and Jurassic rock and has overlain the estuarine landscape with alluvial deposits.

2.4 As the description of North Lincolnshire's geology outlined above states, the area has a number of mineral resources. These play an important role in meeting national, regional and local supply requirements. Based on BGS mineral resources mapping, North Lincolnshire contains the following range of economically important minerals, some of which are used for aggregate purposes:

- Jurassic Limestone
- Chalk
- Brick Clay
- Sand & Gravel
- Silica Sand
- Ironstone

2.5 Hydrocarbons (oil and gas) as well as deep coal and large area of peat deposits are also found in the area.

3. NATIONAL POLICY CONTEXT

3.1 The National Planning Policy Framework (NPPF) 2021 requires MPAs to assess the projected demand for minerals use, to plan for a steady and adequate supply of aggregates. Policies should safeguard existing, planned and potential sites for minerals use, taking full account of opportunities to use materials from secondary and other sources which could provide suitable alternatives to primary materials. MPAs should plan for a steady and adequate supply of aggregates by preparing a Local Aggregate Assessment (LAA) 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)[1].

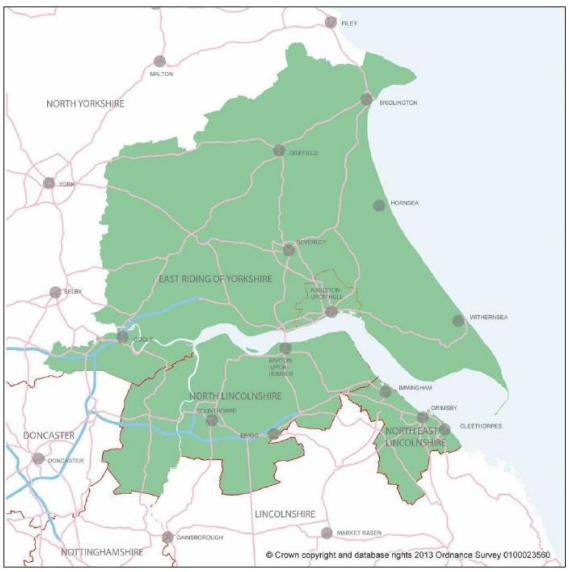
3.2 National Planning Practice Guidance (NPPG) emphasises that LAAs must consider other relevant local information in addition to the 10-year rolling supply, which seeks to look ahead at possible future demand. This includes, for example, levels of planned construction and housebuilding both within a particular area and more generally throughout the country. Average sales over the last three years in particular should be examined to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply.

3.3 The Planning Officers Society and Mineral Products Association have also produced practice guidance on producing LAAs, which provides further guidance on what other relevant local information should be considered.

4. LOCAL CONTEXT

4.1 In order to meet the policy requirements of the NPPF, NLC needs to make provision for a steady and adequate supply of aggregates. More specifically this means providing for land banks of at least 10 years for crushed rock and 7 years for sand and gravel over the plan period to 2038.

4.2 NLC works closely with its neighbours in the Humber area (East Riding of Yorkshire Council, Hull City Council and North East Lincolnshire Council) to produce an LAA for the Humber area. This feeds into the monitoring arrangements of the Yorkshire and Humber Aggregates Working Party (YHAWP), alongside LAAs produced by other Mineral Planning Authorities (MPA) in Yorkshire and Humber covering



[1] NPPF para 213 a)

Doncaster & Rotherham, North Yorkshire, Yorkshire Dales National Park & York, and West Yorkshire.

4.3 The latest version of the Humber LAA (October 2019) calculates a 10 year average of sales data for crushed rock and sand and gravel sales in line with the NPPF. It then monitors whether permitted reserves amount to a land bank of 10 years for crushed rock and 7 years for sand and gravel. Although the LAA does not publish the detailed figures at MPA level, the underpinning data relating to North Lincolnshire (and the combined sub-regions) is provided in the Yorkshire and Humber Aggregate Working Party Annual Monitoring Report 2019.

4.4 To support the North Lincolnshire Local Plan (2020 to 2038), there is a need to understand and set out the average amount, or apportionment, of aggregates that the area needs to provide for on an annual basis, as well as over the lifetime of the plan. This is similar to the approach which has been adopted by East Riding of Yorkshire Council and Hull City Council to support their Joint Minerals Local Plan.

4.5 It was agreed that separate approaches for the East Riding/Hull and North Lincolnshire/ North East Lincolnshire areas would be taken due to there being largely separate markets for aggregates with varying characteristics on each side of the Humber Estuary (north and south), including different export markets, and the cost of transporting aggregates across the Humber Bridge. The main source of information on aggregate supply and demand is the Humber Local Aggregate Assessment. As highlighted in paragraph 4.2 (above), this is the result of close co-operation by the four Humber mineral planning authorities.

4.6 Other key sources of data are the Annual Monitoring Reports prepared by the Yorkshire & Humber Aggregates Working Party (YHAWP), which has also been accounted for within the Humber LAA. These are based on information received from annual surveys of mineral operators across the region. Planning application data can also be used, particularly in respect of landbank information.

5. AGGREGATE SALES AND RESERVES

5.1 The use of historic average sales over the previous 10 year period (2011-2020) as an indicator of future requirements has advantages in terms of simplicity and transparency. However, it does not:

- anticipate future changes in aggregates supply patterns or economic trends;
- account for any emerging environmental issues or constraints that might limit supply; or
- reflect current national and local aspirations for growth, particularly expected growth in house building, which creates an additional requirement for aggregates.

5.2 As part of work undertaken to produce the LAA, the aggregate sales over the 10 year period were based on the figures provided by the YHAWP AMR, to calculate a 10 year and 3 year average figure for the Humber area. Due to the relatively low number of operators in North Lincolnshire, further breakdown of the average figures isn't published due to commercial confidentiality.

Sales of Primary Aggregate from North Lincolnshire

Primary Aggregate (million tonnes / mt)	10 year sales average (2011-2020)	3 year sales average (2018-2020)
Sand and Gravel	0.12	0.23
Crushed Rock	0.48	0.65

5.3 The 3 year average sales figures are higher for both sand and gravel and crushed rock than the 10 year figures, which is influenced considerably by the 2018 data for sand and gravel and the trend from 2014

onwards for crushed rock. Between 2013 and 2014 crushed rock sales increased six-fold and this level has remained, fairly consistently through to 2020.

5.4 Using historic average sales as an indicator of future requirements provides a transparent and simplistic approach; however, there could be further factors that influence future aggregate needs such as expected growth in house building or issues that could impact supply.

5.5 Using the above figures, and accounting for the more recent upward trend in sales, PPG recommends that average sales over the last 3 years should be considered in particular to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply.

5.6 Using figures for 3 and 10 year historical sales trends (noted above) and excluding growth considerations, the land bank for aggregates is calculated below.

Landbank for Primary Aggregates in North Lincolnshire

Landbank (Years)	**10 year average sales data (2011- 2020)**	**3 year average sales data (2018-2020)**
Sand and gravel	26.39	13.85
Crushed rock	69.46	50.82

These figures are based on 2020 reserves of:

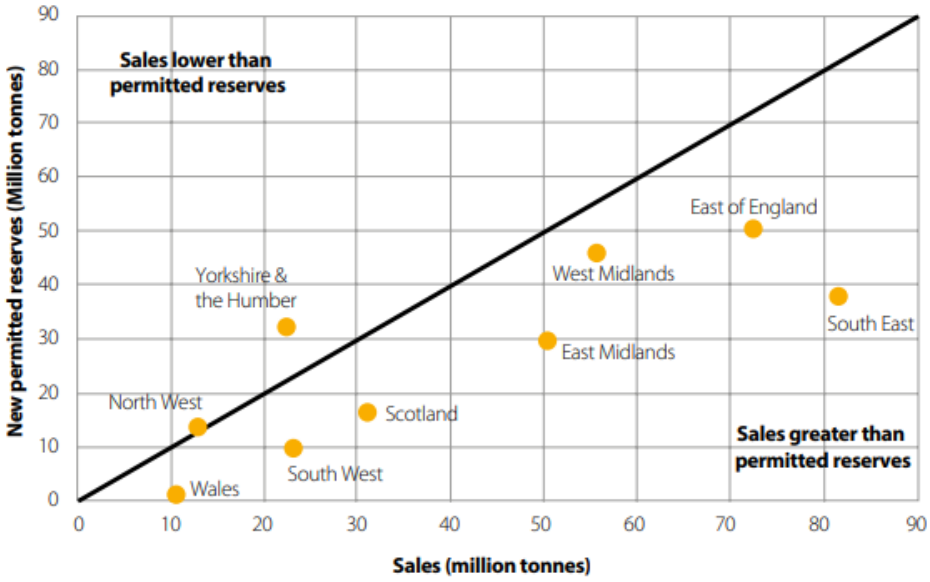
- 3.14 million tonnes sand and gravel reserves
- 33.20 million tonnes crushed rock reserves

5.7 For both sand and gravel and crushed rock, the 3-year sales average (2018-2020) is higher than the 10-year sales average over the period from 2011-2020. The latest Humber Area Local Aggregates Assessment (LAA) published in October 2019, also highlights the increase in crushed rock sales at a regional level, which appears to have become a longer term trend since 2014. This has impact on the variation between the 10 and 3 year average figures. Based on the 10 year average from 2009-18 recorded in the LAA, the land bank for sand and gravel is 8.82 years and for crushed rock is 24.81 years. The Humber Area LAA also provides indicative figures for North Lincolnshire based on the Humber annual aggregates apportionment, which is 7.87 years for sand and gravel and 26.80 years for crushed rock. As noted in the LAA, this indicative figure would be superseded by the evidence produced by North Lincolnshire, using latest evidence to update the apportionment data.

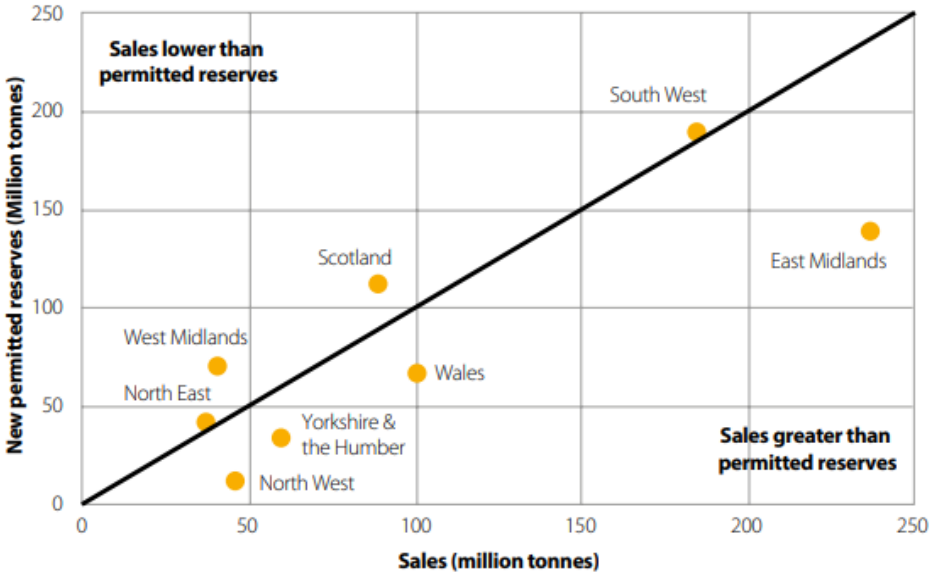
5.8 The latest Annual Mineral Planning Survey (AMPS) was published in 2021 and reports on mineral planning data for 2020. The report outlines key trends in the market, assesses reserves and also provides a summary analysis of planning applications, decisions (including time to gain permission) and plan allocations. The latest data has highlighted a decline in aggregate sales in 2019 and 2020 compared to 2018 (-4.8% and -8.8% respectively), which was largely connected to Brexit and Covid.

5.9 The graphs below summarise the findings of the report to illustrate variation in sales and reserves of sand and gravel and crushed rock at a regional level. Overall in terms of sand and gravel, Yorkshire and Humber with the North West, are the two regions that have reported lower sales than permitted reserves over the 10 year period of 2011-20. On the contrary sales of crushed rock have exceeded new permitted reserves by approximately 20 million tonnes across the Yorkshire and Humber region.

Regional Sales Volumes and new permitted reserves of sand and gravel 2011-2020 [2]



Regional Sales Volumes and new permitted reserves of crushed rock 2011-2020



6. CONSIDERATION OF FUTURE AGGREGATE REQUIREMENTS

6.1 A range of methods could potentially be used to help identify the scale of future requirements for aggregates. Any method used should be compatible with national policy and guidance, be relatively straightforward to calculate and lead to a realistic forecast capable of being monitored.

[2] https://mineralproducts.org/MPA/media/root/Publications/2021/MPA_AMPS_2021.pdf

6.2 The NPPF requires each MPA to calculate their aggregate supply requirements on the basis of average aggregate sales over a 10 year rolling period and other relevant local information.

6.3 Using historic average sales over the previous 10 years as a means of identifying future aggregate requirements has some limitations. It can be viewed as backward looking and does not anticipate any changes in the patterns of aggregates supply as a result of future trends, such as economic growth, or any emerging environmental issues or constraints. The main advantage is its simplicity and transparency. Furthermore, it is supported in principle by national planning policy and guidance. The 10 year average sales data provides a benchmark against which the implications of local factors can be assessed.

6.4 In addition to the rolling 10 year past sales average, planning policy guidance recommends that average sales over the past 3 years are also closely examined to consider any more recent trends that may be emerging with influence on future levels of supply.

6.5 The Managed Aggregate Supply System (MASS) seeks to ensure a steady and adequate supply of aggregate minerals to manage geographical imbalances of natural aggregate resources with demand. Local Aggregate Assessments (LAAs) help inform this process and should contain a forecast of demand, analysis of supply options and assessment of the balance between supply and demand, which includes consideration of any external influences such as economic or environmental opportunities and constraints.

6.6 In order to get a better understanding of the behaviour of the aggregates market within North Lincolnshire, this study will analyse the regional and local data, key demographic profiles, housing and economic indicators, assess movement of aggregates between MPAs and consider the impacts of any pending planning applications that may increase aggregate supply and demand. This is to illustrate to what degree the recorded trends in aggregate sales reflect wider economic conditions. Housing completions, development trajectories and economic forecasts have been used as indicators.

Economic Trends

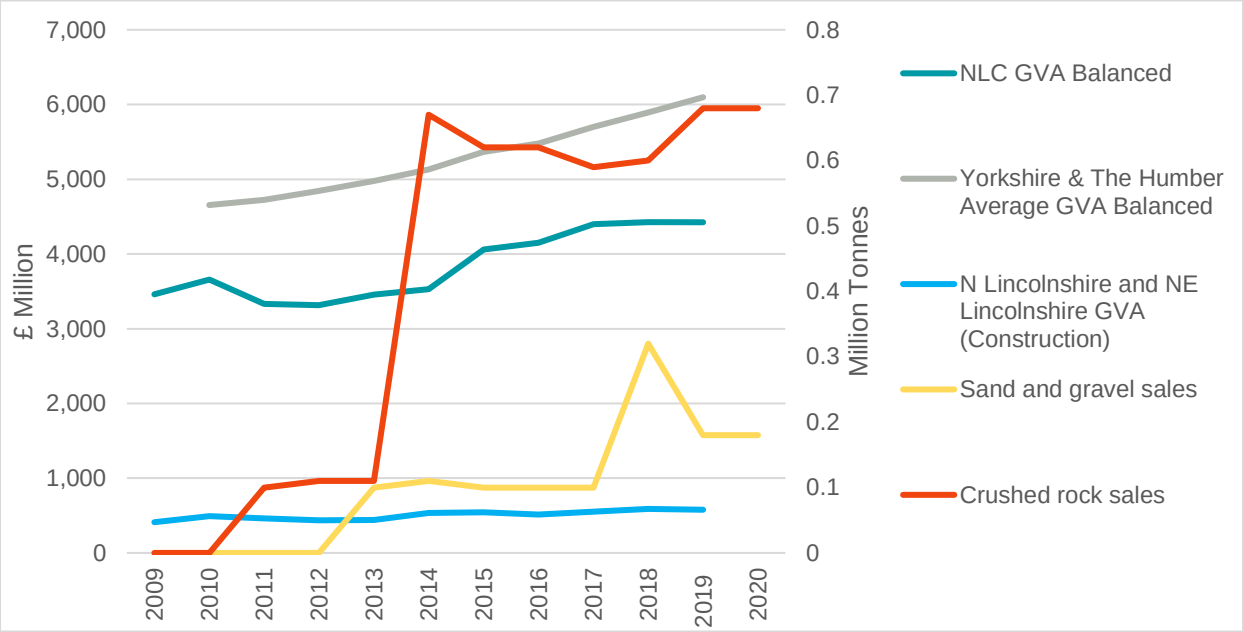
6.7 The Gross Domestic Product (GDP) of the UK has increased year on year since 2009 with a range of between 1% and 3%. However, the data shows that UK economic growth has slowed with GDP increase having decreased from 3% in 2014 to 1.4% growth in 2019. Brexit and the COVID-19 pandemic both took a hit on the UK's economy recently. It is unknown as to how long supply chain issues, high energy prices and the COVID-19 pandemic will continue to affect the economy which could in turn have an impact on the demand for minerals across the UK and within the sub-region.

6.8 GVA in the construction sector over the period of 2009-2019 grew in North Lincolnshire and North East Lincolnshire. This is indicative of an expected return to more normal economic conditions with average annual growth a little above 2%.

6.9 The chart below shows that the performance of North Lincolnshire's economy has fluctuated a little with a dip due to the recession, but it has been steadily growing since 2013. In comparison, the GVA of the Yorkshire and Humber area has been steadily on the rise. The construction GVA of North Lincolnshire and North East Lincolnshire has also grown overall but at a lesser rate with temporary dips.

6.10 The graph appears to suggest there are links between the performance of the local economy and crushed rock sales in the Humber area. That doesn't appear to be the same for sand and gravel sales.

Comparative data of economic activity, including construction, and aggregate sales 2009-2020



Demographic Indicators

6.11 The current population of North Lincolnshire is around 172,300 and is set to increase. During the 10 years between 2009 and 2019, it grew by 4%. Predictions show that the population will have increased by around a further 2.4% by 2038 to 177,331, during the lifetime of the new North Lincolnshire Local Plan.

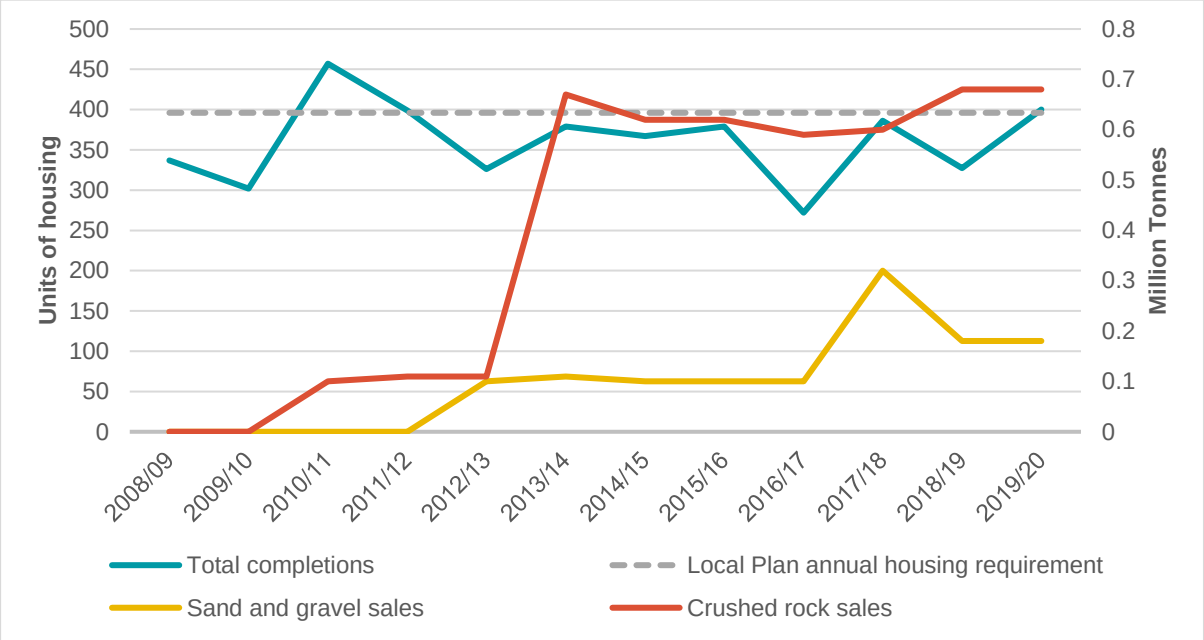
6.12 The largest increase in population is projected to be in the over 65 age group, with an expected 35% increase over the Plan period. The number of households in the area is expected to increase by 8%, which is equivalent to approximately 6,000 households.

Housing Indicators

6.13 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 total number of housing completions in North Lincolnshire between 2010/11 and 2019/20 was 3,683, with the annual average number of housing completions within that time period being 368 dwellings.

6.14 The adjacent graph shows a broad correlation between sand and gravel sales and housing completions between 2009 and 2020. The graph doesn't show a clear historic correlation between crushed rock sales and housing completions in North Lincolnshire; however, there is some correlation with sand and gravel sales.

Comparative data of housing completions and aggregate sales



6.15 The annual housing requirement for North Lincolnshire in the emerging Local Plan is 396 dwellings per annum following the standard methodology as set out by DLUHC. Average delivery of housing over the last 10 years has been 368 completions, which is below the planned future delivery outlined in the emerging Local Plan.

6.16 It should also be noted that although correlation may be noted in the sand and gravel sales and housing completions data, the exact nature of the relationship is difficult to establish as there will be some aggregates exported elsewhere and also supplied from elsewhere. Also it is estimated that only about 25% of construction aggregate is associated with new housing[3], therefore the graph presented above is only an indicative illustration. This is also covered in the Humber LAA (2017), which highlights and cites several reasons behind the difficulty in establishing the exact nature of the relationship between aggregate sales and housebuilding.

6.17 As a general guide, The Mineral Products Association Report Mineral Products Industry at a Glance (2016) suggests that 200 tonnes of aggregate are required to build one house. If, as is anticipated, 7,128 dwellings are delivered in North Lincolnshire over the Plan Period up to 2038, that would equate to around 1.4mt of aggregate. Alternatively, as mentioned in the Humber LAA (2018) - using the BGS 'rule of thumb', building a new home would require around 60 tonnes of aggregates, which would equate to around 427,680 tonnes of aggregate. There is significant difference in these estimations; therefore reliance on historical trends would seem a reasonable approach for North Lincolnshire to adopt. Nonetheless, the highest estimation by the BGS is within the threshold of current reserves reported overall.

6.18 The Humber LAA considers future housebuilding to significantly impact the demand for aggregates over the lifetime of each Humber authorities' plans. Based on adopted and emerging development plans, a total of

3 https://mineralproducts.org/MPA/media/root/Publications/2020/MPA_Planning_for_the_future_2020.pdf

around 54,180 new dwellings (3,612 dwellings per annum) will be delivered across the Humber area up to 2032.

Major Infrastructure Projects

6.19 The Humber LAA suggests that the Humber area will see a number of major developments and one-off infrastructure projects over the coming years, all of which will have an important role in helping to support the local economy and housing growth. These have the potential to increase demand for aggregates in the Humber area.

6.20 At a local level, North Lincolnshire aspires for economic growth and prosperity. The Able Marine Energy Park (AMEP), a major project, will involve the development of 245ha of land on the South Humber Gateway for the manufacturing and assembly of off-shore wind turbines with extensive space for the component parts' storage. It will involve the construction of a 1.3km long quay that will extend into the Humber Estuary to allow operators to load turbines onto ships to be taken to their destinations off the East Coast. This project is the largest of its type in the country and will be a major job creator.

6.21 In close proximity to the AMEP site is the Able Logistics Park which involves the development of 454ha of land for facilities to support the growth of the South Humber Gateway. It includes the creation of transport depots, warehousing and external storage areas, together with offices, a business park and a motel. A further 190.07ha of land is proposed for allocation for employment related uses through the new local plan.

6.22 The Lincolnshire Lakes development is the area's largest regeneration project. The vision is to create six high quality, sustainable village communities containing a total of 6,000 new homes on land between the western edge of Scunthorpe and the River Trent, with major opportunities for leisure, sport and recreation. It will also provide an ideal setting for new businesses with the creation of new high-quality employment space within a business park. The first phase of the development is expected to be delivered by 2038 which includes 2,150 new homes, 25.15ha land for employment and supporting community and leisure facilities, local centres, strategic mixed-use areas and blue and green infrastructure.

6.23 Adequate road infrastructure is also needed to support this strategic allocation. A strategic highway network with two new junctions would provide the connectivity between Scunthorpe and the surrounding villages. Further improvements will include upgrading the existing B1450 Burringham Road by widening it and carrying out improvements to the Scotter Road Junction and creating a new connection to the southern terminating junction. A new east/west link road would provide connectivity between the existing urban area, new villages and strategic highway network at the northern junction, and a new Primary Route linking the northern and southern allocations.

6.24 Although the planned infrastructure is significant, it is difficult to be sure of the direct impact on aggregate supply as materials may be sourced from elsewhere and there will also be a certain level of secondary and recycled aggregates, with increasing focus on improving this ratio as has been the trend in recent years.

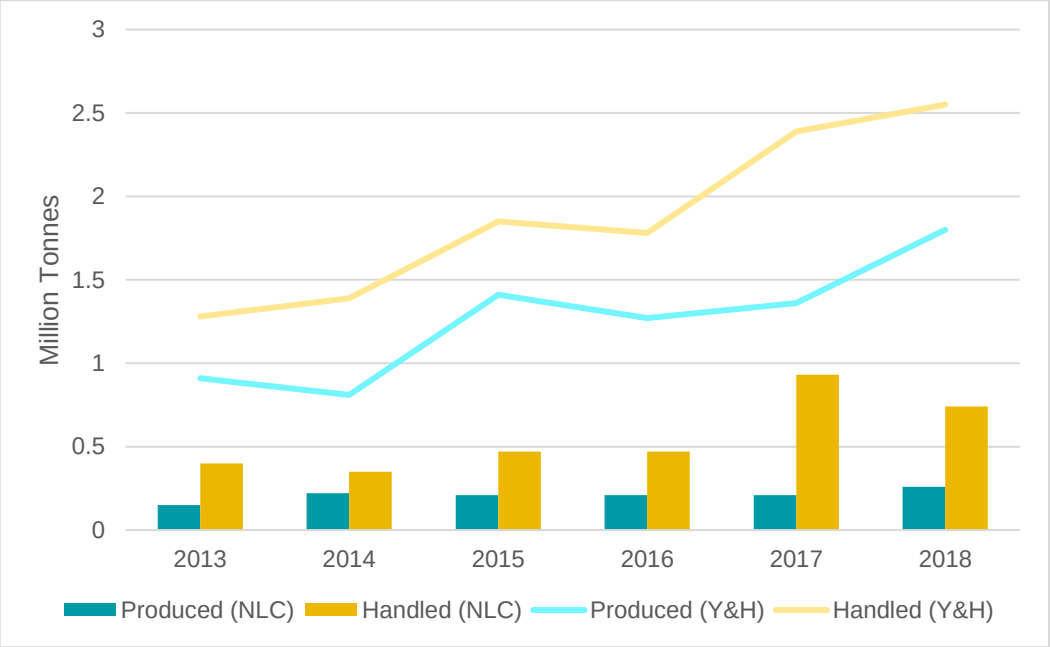
Secondary and Recycled Aggregates and Marine Aggregates

6.25 Recycled aggregate, which includes 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. Data on secondary and recycled aggregate production and use is variable and incomplete. This is because, while some sites operate under license and can be monitored, much recycling and re-use occurs on individual construction sites, is temporary in nature and does not produce data.

6.26 Data is published in the Yorkshire and Humber AMR (2019) on the production of secondary and recycled aggregates within North Lincolnshire and East Riding as shown in the below table (figures are provided to the nearest 0.01 tonnes).

MPA	2013		2014		2015		2016		2017		2018	
(Tonnes)	Produced	Handled	Produced	Handled	Produced	Handled	Produced	Handled	Produced	Handled	Produced	Handled
North Lincolnshire	0.15	0.40	0.22	0.35	0.21	0.47	0.21	0.47	0.21	0.93	0.26	0.74
East Riding	0.40	0.52	0.42	0.71	0.47	0.96	0.47	0.88	0.50	0.87	1.33	1.36
Kingston Upon Hull City	0.26	0.27	0.05	0.24	0.55	0.33	0.42	0.35	0.47	0.44	0.13	0.30
North East Lincolnshire	0.10	0.09	0.12	0.09	0.18	0.09	0.17	0.081	0.18	0.15	0.077	0.15
TOTAL	0.91	1.28	0.81	1.39	1.41	1.85	1.27	1.78	1.36	2.39	1.80	2.55

Secondary and Recycled Aggregates in North Lincolnshire and Yorkshire and Humber (2013 – 2018)



6.27 As also considered by the Humber Area LAA - due to the variable nature of the information, it is difficult to accurately assess the role that secondary and recycled aggregates have within aggregate supply and demand. By way of illustration, Construction and Demolition Waste (a form of Recycled Aggregate) can be processed on site and then either reused on site or taken direct to other construction sites for use. Collecting information from these sites is extremely difficult and therefore data may not be completely accurate and could also be subject to double counting.

6.28 The National and Regional Guidelines for Aggregates Provision in England (2005-2020) includes assumptions on the amount of recycled and secondary aggregate that should be provided in the Yorkshire and Humber region. It estimated that 133 million tonnes will be sourced from recycled or secondary

materials, which is equivalent to 31% of the overall total of construction aggregates (2005-2020). The assumptions should be viewed as an underestimation due to the reasons outlined in terms of underreporting and collection of data.

6.29 The YHAWP commissioned a Marine Aggregates Study to assess the potential deliverability of a substantially greater supply of marine aggregate into the Yorkshire and Humber region, in substitution for an element of supply currently provided by land-won resources. It found there was a very large marine aggregate resource of the required quality, and sufficient fleet capacity to land it.

6.30 The resources located off the Humber Estuary are thought to be extensive. Crown Estate information produced in 2018[4] shows that there are currently 10 licensed dredging areas in the North Sea in the Humber region, from which 5.9 million tonnes can be extracted per year. The sand and gravel resources found in this area range from fine sands to coarse gravels. One new dredging application could potentially increase permitted extraction by 0.6 million tonnes if approved. Estimates suggest there are 26 years of primary marine aggregate production permitted (Humber Area LAA).

6.31 Only a limited amount of infrastructure used for, or with the potential to be used for, the transport of marine aggregates is safeguarded. Stakeholders consider the move towards a greater utilisation of marine aggregates will most likely take place beyond 5 years and thereafter increase with time. Economically, operators did not believe that the marine option was viable, but nevertheless the viability gap against land won aggregate is narrowing. The study noted that the Humber Bridge toll creates separate aggregate markets north and south of the Humber, due to the cost of a lorry making a round trip across the bridge. For example, it is not cost effective to take marine material across the bridge (or around) but this would be circumvented if there was somewhere to land marine material on the south side. With the reduction in bridge tolls since the study was completed, this may be something that needs to be monitored.

6.32 The Marine Aggregates Study made recommendations for further work that include MPAs reviewing Local Plans to consider the requirements of the NPPF for safeguarding aggregate infrastructure and a formal regional Local Authority group to collaborate on cross boundary aggregate issues (which may fall within the scope of reference for the YHAWP).

6.33 Any increase in sales of secondary, recycled and marine aggregates in NLC and the wider Humber region will likely lead to a reduction in the need for primary land won aggregates.

7. CROSS BOUNDARY MOVEMENTS

7.1 Details of the movement of aggregates in and out of the North Lincolnshire area is provided by using the Aggregate Minerals Survey 2019. It is the main source of information on the movement of aggregates between different Minerals Planning Authority Areas and Sub-Regions. Other MPAs whose LAAs are considered relevant to NLC may also contain information on cross boundary movements. However, most of the data has been analysed at the Humber sub-region level and can therefore not be analysed at smaller geographies.

Doncaster and Rotherham

7.2 The latest Doncaster and Rotherham LAA (2021) assesses possible sources of supply from neighbouring areas including North Lincolnshire. The proximity to the Doncaster area (within 30 miles) of active sand and gravel/silica sand sites within North Lincolnshire is highlighted. It is considered that material from these could potentially assist in meeting supply to the Doncaster area. Although, it is considered that these sites would be unlikely to supply the Rotherham area. Doncaster and Rotherham have been identified historically

[4] Marine Aggregates Capability and Portfolio 2018, The Crown Estate

by the Yorkshire and Humber Regional Aggregate Working Party (YHRAWP) as the 'South Yorkshire' sub region, due to minerals being found within the authority boundaries. The two authorities have also consistently worked together on mineral matters.

7.3 The figures for Doncaster's provision of aggregates to Yorkshire and Humber have dropped between 2014 and 2019, according to the latest AMS. Exports from Yorkshire and Humber for sand and gravel have came from East Riding with none of South Yorkshire's crushed rock consumption met from the Humber area.

Nottingham and Nottinghamshire

7.4 The latest LAA (2021) highlights that the sand and gravel from the Nottinghamshire area that has traditionally been supplied into the Yorkshire and Humber region has been declining since 2014. Exports from Nottinghamshire to the Humber area in 2018 equated to 64,000 tonnes, which was a 55% reduction from levels reported in the 2014 survey. The LAA does note that caution should be applied when comparing the figures as the response rates have varied between surveys. No imports from the Humber area are reported.

7.5 Nottinghamshire's LAA reports that 63,000 tonnes of crushed rock was imported to Nottinghamshire from North Lincolnshire (2014 data).

Lincolnshire

7.6 Lincolnshire LAA (2019) notes that 4.5% of sand and gravel (0.7% to the Humber region) and 3.2% of crushed rock exported from the county goes to the Yorkshire and Humber Region.

7.7 The AM 2019 Survey does not give detailed figures that the Humber region would be a consumer of North Lincolnshire's aggregates or that the Humber area exports aggregates to Lincolnshire.

West Yorkshire

7.8 The West Yorkshire LAA (2019) acknowledges that the continuity of the area's supply is dependent on cooperating with neighbouring MPAs. It notes that under the Duty to Corporate, the West Yorkshire authorities should seek agreement with the MPAs for the areas to ensure that they will continue to include the exportation of aggregates to West Yorkshire in their Local Plans.

7.9 The Humber LAA (2017) shows that in 2014 West Yorkshire's 20%-30% of sand and gravel consumption was supplied from the Humber area, from East Riding of Yorkshire. The AM 2019 Survey provides detailed figures that the Yorkshire & the Humber area supplied 0.46 million tonnes of sand and gravel and 2.2 million tonnes of crushed rock to West Yorkshire.

7.10 None of the crushed rock consumed within the West Yorkshire area was sourced from the Humber. Under 1% (7,240 tonnes) of the Humber's crushed rock consumption was supplied from West Yorkshire, and all of this was from Leeds City Council's area. West Yorkshire made no contribution to the Humber's sand and gravel consumption.

North Yorkshire

7.11 The North Yorkshire LAA (2018) recognises that 19% of their sand and gravel and 19% of their crushed rock consumption was met by imports. Sand and gravel was imported to the North Yorkshire area from East Riding of Yorkshire. It represented between 1% and 10% of the sand and gravel consumed within the area in 2014.

7.12 The Humber LAA states that none of the crushed rock consumed within the North Yorkshire area was sourced from the Humber region.

7.13 The AM 2019 Survey doesn't provide detailed figures on aggregates sales from the Humber region to North Yorkshire.

7.14 The North Yorkshire LAA (2018) shows that in 2014 North Yorkshire's 20%-30% of its total sales was exported to the Humber sub-region that equals to 85,000 to 127,000 tonnes. Also, 10%-20% of the area's crushed rock extraction was exported to the Humber sub-region which equals to 72,000 to 145,000 tonnes.

During the preparation of the Local Plan, Duty to Cooperate meetings have taken place to understand the position in terms of cross boundary movement and needs of neighbouring local authorities.

8. PREFERRED APPROACH - FUTURE NEEDS

8.1 As demonstrated above, and widely recognised in general terms, there is a general correlation between demand for aggregates (specifically sand and gravel) and housebuilding. This trend is less evident in terms of all construction activity, nor overall in GVA analysis to compare economic activity with aggregate demand.

8.2 in line with the sales-based methodology employed in the East Riding and Hull Joint Minerals Plan, which was examined and found to be acceptable by the Planning Inspectorate[5], sales data from the past 10 years and 3 years were observed. Due to the considerable growth in sales for sand and gravel since 2018 and crushed rock sales since 2014, past 5-year sales data was also observed for reference. Noting the correlation to housebuilding and the variation in terms of the latest sales data for sand and gravel reserves (2018), forecasting future reserves has been based on the 10 year sales data, to include an uplift that is aligned to the predicted growth in housing set out in the emerging Local Plan (396 dwellings per annum). Average housing delivery over the last 10 years is 368 homes per year, so an uplift of 7.5% will be necessary to deliver the annual Local Plan housing requirement. This recognises the large variation between the 3 year and 10 year average figures, but also considers the recent increase in the annual data and impacts of housing growth on aggregates.

8.3 As noted above there has been a relatively steady trend in crushed rock sales since 2014 so the 3 year average figure for sales seems to reflect this position more closely that the longer term data over 10 years. There isn't a notable correlation between crushed rock sales and house building, which is likely to reflect the fact that its main use is as roadstone for road construction, with some use in producing concrete. It therefore seems appropriate to use the 3 year average figure for crushed rock, in line with PPG and the data available. It is also difficult to determine the impact of planned infrastructure and construction growth within the area, as has been noted in the Humber LAA and Hull and East Riding's evidence, given the lack of a strong correlation in historical data for the area.

8.4 There is a lack of defined guidance on the approach, with various methods having advantages and disadvantages, largely relating to the lack of reliable, direct and quantifiable data to robustly link the inter-relationship to a range of potential external factors. It is also important to bear in mind that 'double counting' of growth factors could be an issue from considering a range of indicators. Whilst it may be expected that there will be a connection in GVA growth and demand for aggregate, that has not been demonstrated on comparing the data within this report, or in other local evidence documents published by neighbouring authority areas. The following reasons provide further justification for the approach taken:

- Planning Practice Guidance states that MPAs should look at the rolling average sales data over the past 10 years with consideration of other local information that seeks to look ahead at possible future demand. Average sales over the past 3 years should also be considered to identify the general trend

[5] Report on the Examination of the East Riding of Yorkshire & Kingston upon Hull Joint Minerals Local Plan 2016-2033 (July 2019)

of demand as part of the consideration of whether it might be appropriate to increase supply (PPG ID: 27-064-20140306).

- Given there is a relatively large variance in the 3 year and 10 year averages for sand and gravel sales (of 0.23 mt compared to 0.12 mt), which is largely accountable to a spike in 2018, the 10 year average was considered most appropriate, with an uplift for growth applied.

- For crushed rock there is also considerable difference between the 3 and 10 year average for sales (0.65 mt compared to 0.48mt). As noted earlier there was a six-fold increase in sales between 2013 and 2014, which has remained at a relatively steady level since then. On that basis the 3 year average is considered the most appropriate. As there hasn't been a significant trend identified between crushed rock sales and housing delivery or GVA it is difficult to ascertain future growth on current levels. It has been recognised that a large proportion of crushed rock is used in road construction and therefore could support the planned infrastructure growth; however, the impact of infrastructure is particularly difficult to quantify. The land bank for crushed rock is well above that required by national policy at 50 years (based on 3 year average levels of sales). Therefore, even with over 150% growth there is still adequate supply over the plan period.

- The Humber LAA has provided indicative apportionments for North Lincolnshire at 0.37 mt of crushed rock and 0.12 mt of sand and gravel per annum. The conclusions drawn from this report are based on reserves of 3.14 mt of sand and gravel and 33.2 mt crushed rock, based on returns to inform the AMR. The estimated requirements of 0.65 mt for crushed rock and 0.13 mt for sand and gravel, provides a land bank of 50.8 years and 24.54 years respectively. This accounts for an uplift in growth of 7.5% (associated to housing demand for sand and gravel); however, current reserves will allow for an additional 36% growth in sand and gravel sales over the plan period.

- In terms of movement of aggregates, which are also difficult to monitor accurately due to reporting across the different LPAs and varied response rates from operators, there is a relatively balanced flow with regard to imports and exports. The AMS 2019 shows greater imports for aggregates from East Midlands to the Yorkshire and Humber area; which will require further monitoring in terms of any reliance on this source across the Humber area. The North West has a greater level of imports of crushed rock than exports to the Yorkshire and Humber area.

- Regional sales volumes of sand and gravel were approximately 10mt lower than new permitted reserves within Yorkshire and Humber, which should be monitored closely; however, this provides a positive indication of supply levels across the region.

- There is the potential for future increases in marine aggregate landings, as indicated previously in this report, which would reduce the need for land-won aggregates. There is also ongoing improvements in the industry to promote the transition to a more circular economy to increase secondary and recycled aggregates as well as reporting to accurately assess the levels on-site to help inform wider supply and demand estimates for aggregates. Between 2013 and 2018, production of secondary and recycled aggregates in North Lincolnshire increased by 73%. If this increased at the same rate, given the current gaps in data reporting and future improvements in industry processes, secondary and recycled aggregates could amount to 1.3 mt by 2038.

8.5 For both sand and gravel and crushed rock, the aggregate apportionments, and by extension the existing landbanks, will need to be closely monitored and kept under review.

9. CONCLUSIONS AND NEXT STEPS

9.1 It is essential that a steady and adequate supply of aggregates is maintained to support growth and development in the North Lincolnshire area. In accordance with national policy and guidance on aggregate supply and planning to meet future demand, 10 and 3 year sales averages and current aggregate apportionments for the Humber area have been considered, alongside other relevant local factors such as supply/demand requirements from neighbouring areas, future house building, economic growth and major development and infrastructure projects.

9.2 As a result, annual apportionments of primary aggregate have been proposed for the emerging North Lincolnshire Local Plan (to include an uplift for growth) are as follows, with resulting land bank estimations.

	Annual Apportionment (Million tonne per annum)	Reserves (Million tonne)	Land bank (Years)
Sand and gravel	0.13	3.14	24.5
Crushed rock	0.65	33.20	50.8

9.3 A number of sites in the North Lincolnshire area receive and/or produce recycled aggregates through treatment of construction, demolition and excavation waste, whilst there are others that produce secondary aggregates as a by-product of industrial processes. Estimates of secondary and recycled aggregates contribution towards overall supply cannot be fully established at this stage. The capture of consistent and reliable data on secondary and recycled aggregate production will continue to be the subject of future work; however, the impact of their contribution to supply and demand should be recognised.

9.4 A further consideration, which is also difficult to quantify at present, is the role of marine aggregates and their contribution to balance the supply of primary aggregates in the future as it likely becomes a more viable option for the Humber area.

9.5 Apportionments and progress towards meeting them will be monitored through the Councils and Yorkshire and Humber Aggregate Working Party annual monitoring reports, annual updates to the Humber Area LAA, the National Aggregate Minerals Survey as well as on-going Duty to Co-operate discussions.

10. MORE INFORMATION

10.1 For more information about this paper, or the North Lincolnshire Local Plan (2020 to 2038) in general, please contact:

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Useful Reading

The following documents and information sources have been used to inform the preparation of this paper:

- Mineral Resources Information in Support of National, Regional & Local Planning – Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull) (2005), BGS & ODPM
- Aggregate Minerals Survey for England and Wales 2014 & 2019
- Humber Local Aggregate Assessment (July 2018), EYRC/HCC/NELC/NLC
- Yorkshire & Humber Aggregates Working Party – Annual Monitoring Reports
- National Planning Policy Framework (July 2021), MHCLG (now DLUHC)
- Planning Practice Guidance (March 2014 onwards), MHCLG (now DLUHC)


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