

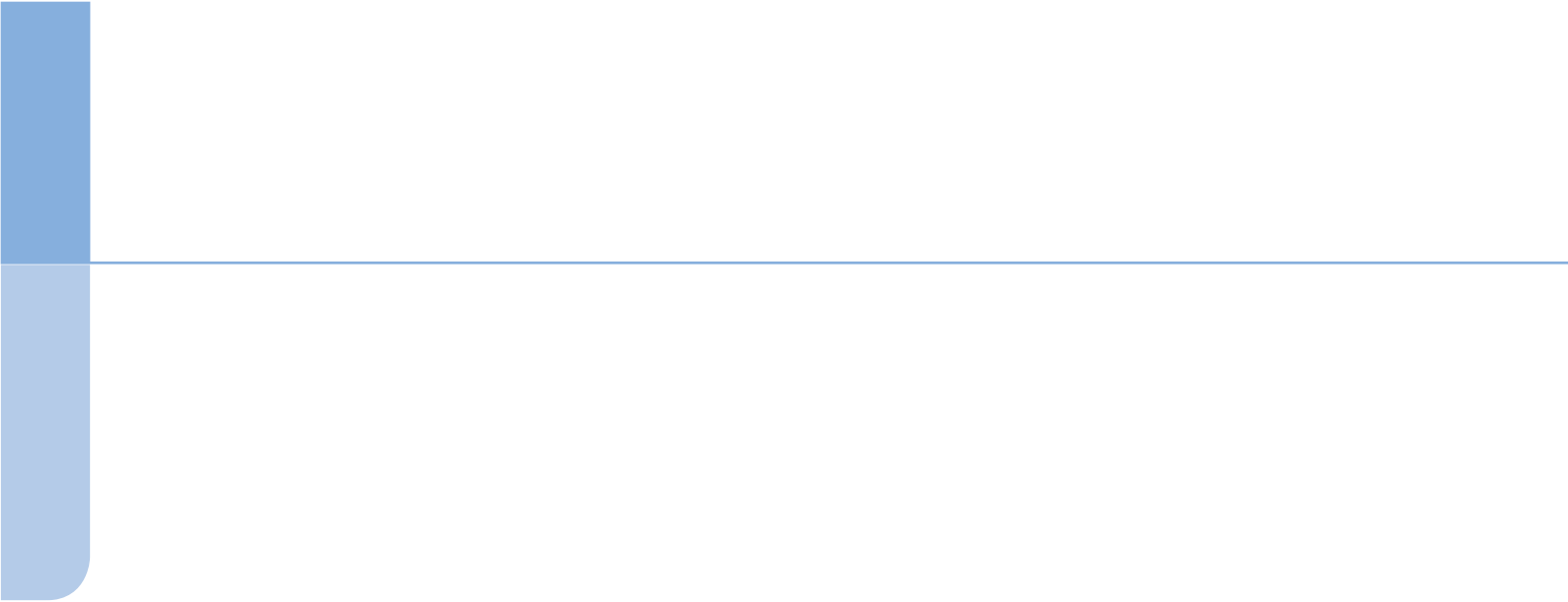
North East Lincolnshire New Local Plan

Issues Paper: Minerals

Analysing the evidence and
identifying the issues

August 2014





Executive summary

This paper is one of a series of Issues Papers, prepared to support the progression of a new Local Plan for North East Lincolnshire. It summarises the evidence we have gathered and the key issues and challenges arising, in relation to minerals, that will lead to the identification and appraisal of options in the new local plan.

The importance of minerals is highlighted in supporting sustainable economic growth, providing a source of energy, and the materials needed to construct infrastructure and buildings: but also that they are a finite natural resource which require safeguarding if the right minerals are to be available; which is the role of the planning system. The paper refers to the conflict that can arise with other land uses in extracting minerals given that they can only be worked where they are found.

The paper summarises the current policy framework and guidance relating to minerals and the evidence sources from which our information is drawn.

The paper states that North East Lincolnshire Council is a Minerals Planning Authority (MPA) and has responsibility to plan for minerals in its local plan, including taking full account of strategic planning issues beyond the borough's boundary; for example, in terms of the borough's contribution, if appropriate, to the regions mineral needs. The paper mentions that North East Lincolnshire Council has undertaken, in conjunction with nearby Councils, a Local Aggregate Assessment (LAA) in order to assess the wider area's minerals needs and whether this can be met from existing and future workings.

The paper provides a summary of North East Lincolnshire's geology and the evidence about what mineral resources are present locally. These resources are of sand and gravel, blown sand (silica sand) – used in industrial processes - and higher purity chalk; although the quantity and quality of all of these resources is unknown. The paper provides an indication of the location of the resource.

The borough's most significant deposits of sand and gravel, which are important both locally and nationally, are identified in the paper as in an area between Habrough and Laceby. Currently, there are no sand and gravel working in the borough although there has been historically.

Sparse deposits of silica sand are located along the east coast in the Cleethorpes area and are considered to be important both locally and nationally; although extraction does not take place in the borough and neither are there any known historic silica sand workings.

An extensive chalk resource exists in the west of the borough in the Lincolnshire Wolds. Whilst extraction takes place in neighbouring areas none takes place in North East Lincolnshire.

There are no identified deposits of brick clay in North East Lincolnshire; this resource is only identified in areas where it is actively worked. Brick clay has been previously extracted from a site in Humberston.

Oil and gas extraction, including shale gas, is referred to in the paper. It highlights that that such development occurs in three phases: exploration, in which an operator seeks to identify a resource; appraisal, where a discovered resource is tested; and the production phase, in which a resource is extracted. It stresses the need the need for planning permission, and other consents, before any work can take place. It refers to a Petroleum Extraction and Development Licence currently covering part of North East Lincolnshire and that to date, the council has not been notified of any successful exploration and appraisal work within North East Lincolnshire and, as a result, no oil or gas discoveries have been made.

The paper mentions that the borough is underlain by coal, but that there is no evidence of historic coal working within the borough. Furthermore, the Coal Authority has confirmed that no considerations are required to be made in the local plan with regards to coal safeguarding.

The paper underlines that the Port of Immingham has the potential for marine dredged aggregate landings of a significant scale and that, in the short to medium term, there is the potential availability of a rail-linked wharf.

The paper refers to the clear need for aggregate minerals and an identified shortfall in the Humber area to 2030. It will therefore be necessary to expand some existing mineral extraction sites, form new ones, or increase aggregate supply from secondary, recycled and marine dredged sources. It further identifies that nationally silica sand deposits are not extensive and that as their scarcity increases, the importance to safeguard the resource locally, will increase.

The potential designation of Minerals Safeguarding Areas (MSAs) in local plans, as supported by national guidance, is highlighted and that such a designation does not provide a presumption that planning permission will be granted for mineral working.

The local minerals issues identified in the paper for the new local plan are given as:

- The extent to which minerals and related infrastructure should be safeguarded;
- North East Lincolnshire's contribution to the supply of aggregates; and
- Establishing, within the new local plan, appropriate policies and meeting wider sustainability objectives.

Finally the paper identifies a range of issues that will need to be balanced and addressed in considering the spatial options. These are:

1. Address the NPPF requirement to safeguard minerals resource;
2. Ensure minerals related infrastructure is safeguarded;
3. Contribution to the supply of aggregates, and;
4. Establishing appropriate criteria-based policies and meeting sustainability objectives.

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Introduction

- 1.1** Minerals are a finite natural resource which are essential to support sustainable economic growth; providing a source of energy, and the materials needed to construct infrastructure and buildings. Minerals can only be worked where they are found, which can cause conflict with other land uses. The role of the planning system is to ensure a sustainable supply of minerals, including aggregates, and to secure the long-term conservation of mineral resources.
- 1.2** This paper considers all mineral resources, it includes:
- **Aggregate minerals** - These include sand and gravel, and crushed rock;
 - **Industrial minerals** - These are necessary to support industrial and manufacturing processes and include a wide range of mineral resources including brick clay and silica sand; and
 - **Energy minerals** - These are used in the generation of energy and include shallow and deep-mined coal, as well as oil and gas, including unconventional hydrocarbons such as shale gas.

Legislation, policy and guidance

Legislative Context

- 2.1** The council in its role as a Minerals Planning Authority (MPA), is responsible for mineral planning matters under *the Town and Country Planning Act 1990, the Planning and Compensation Act 1991, the Environment Act 1995 and the Planning and Compulsory Purchase Act 2004*.
- 2.2** The council is responsible for preparing planning policies for the provision of minerals in a minerals plan and has a duty to determine planning applications for the winning and working of minerals.
- 2.3** Minerals are defined in legislation as "all substances of a kind ordinarily worked for removal by underground or surface working, except that it does not include peat cut for purposes other than for sale"⁽¹⁾.
- 2.4** Section 110 of the *Localism Act 2011* introduced the duty to co-operate by amending the *Planning and Compulsory Purchase Act 2004*⁽²⁾. This places a statutory duty on local authorities to work together to address strategic planning issues which cross administrative boundaries. The supply of minerals is a strategic issue.

Policy context including the existing Development Plan

National Planning Policy Framework

- 2.5** National planning policy for minerals is outlined in the *National Planning Policy Framework, 2012 (NPPF)* which has replaced the former Minerals Planning Statement (MPS) and Minerals Planning Guidance (MPG) documents.
- 2.6** The NPPF places a number of requirements on minerals planning authorities, which include the need to identify and includes policies to⁽³⁾:
- Manage the extraction of mineral resource of local and national importance;
 - Take account of the contribution that substitute, secondary and recycled minerals can make to the supply of materials;
 - Safeguard known locations of specific mineral resources that are of local and national importance;
 - Safeguard key supporting infrastructure and facilities used for the handling and processing of minerals;
 - Outline criteria against which planning applications will be assessed to address unacceptable adverse impacts caused by development, and;
 - Ensure worked land is reclaimed at the earliest opportunity.

1 Section 336, Town and Country Planning Act 1990.

2 Section 33A, *Planning and Compulsory Purchase Act 2004* as amended by the *Localism Act 2011*.

3 Paragraph 143, National Planning Policy Framework.

- 2.7** Minerals planning authorities (MPAs) are required to plan for the steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment (LAA), based on a rolling average of 10 years sale data and other relevant local information⁽⁴⁾. A LAA should provide an assessment of all aggregate supply options including from primary, secondary, recycled and marine dredged sources. MPAs should make provision in their mineral plans to take account of the findings of their LAA, taking into account advice from the relevant Aggregate Working Party (AWP)⁽⁵⁾. The functions of the working parties is to monitor the level of reserves and sales of primary and secondary aggregates, and imports and exports of primary aggregates.
- 2.8** For oil and gas development, MPAs are expected to distinguish and outline policies for the three phases of hydrocarbon development (exploration, appraisal and production).

National Policy Statements

- 2.9** The Overarching *National Policy Statement for Energy (EN-1)* was published by the Department for Energy and Climate Change (DECC) in July 2011. This document outlines the Government's aim to move away from a reliance on finite fossil fuel resources such as gas, oil and coal which have a significant carbon impact, to a secure low carbon energy system.
- 2.10** Owing to the gradual depletion of resources, fossil fuels will become scarcer but will still be in demand and will therefore command higher prices. The use of fossil fuels releases significant quantities of harmful emissions into the atmosphere.
- 2.11** National Policy Statements are a material consideration when North East Lincolnshire Council determines planning applications.

Regional Strategy

- 2.12** The *Yorkshire and Humber Plan Regional Spatial Strategy (RSS) to 2026* was partially revoked⁽⁶⁾ by the Secretary of State on the 22 February 2013.
- 2.13** Policy ENV4 of the RSS previously sought to safeguard mineral deposits and maximise the use of secondary and recycled aggregates, in order to reduce dependency on primary extraction. The document is referenced here as it outlined apportionments for the extraction of aggregates on a sub-regional basis, divided on the basis of historic shares in aggregate production.

4 Paragraph 145, *National Planning Policy Framework*.

5 North East Lincolnshire Council is a member of the Yorkshire and Humber Aggregate Working Party.

6 The Regional Strategy for Yorkshire and Humber (Partial Revocation) Order 2013 (S.I. 2013/117). Policies relating to the City of York greenbelt were retained.

North East Lincolnshire Local Plan (2003)

2.14 North East Lincolnshire's development plan currently comprises the saved policies of the *North East Lincolnshire Local Plan, adopted in November 2003*. A direction made by the Secretary of State under *Paragraph 1(3) of Schedule 8 of the Planning and Compulsory Purchase Act, 2004* saved five policies which relate to minerals. These policies are all considered to be compliant with the NPPF. A summary of the aims of these policies is provided in Table 2.1 'Local Plan Saved Policies Summary'.

Local Plan Saved Policies Summary		
Policy	Title	Summary
MW1	Determination of applications for minerals extraction	This criteria-based policy outlines the factors against which applications for minerals extraction will be considered, including the consideration that the reserve is of sufficient quality and quantity for extraction, that visual and amenity impacts will be acceptable, that restoration proposals are satisfactory and that local transport facilities are adequate.
MW2	Transportation of minerals	This policy seeks to ensure that transportation arrangements for minerals are satisfactory, including the consideration of the potential impact on local communities. The policy gives preference to transportation by means other than road.
MW4	Restoration and aftercare (Mineral workings)	This policy requires reclamation and restoration proposals to accompany planning applications for mineral extraction, with a specific mention to agricultural land quality.
MW5	Oil and gas operations	This criteria-based policy outlines the factors by which applications specifically for oil and gas operations will be considered against, including: environmental considerations, environmental protection, restoration and aftercare proposals and transportation methods.
MW6	Safeguarding mineral deposits	This policy seeks to safeguard mineral deposits which are, or may become, of economic importance, by ensuring that undesirable surface development does not needlessly sterilise the resource.

Table 2.1 Local Plan Saved Policies Summary

Guidance

National Planning Practice Guidance

- 2.15** Technical guidance for minerals was published by the Department for Communities and Local Government (CLG) alongside the NPPF. This document provided technical guidance with regards to the proximity of mineral workings to communities, dust emissions, noise emissions, site stability, restoration and aftercare, and guidance on the calculation of landbanks for industrial minerals. This guidance has since been republished in the National Planning Practice Guidance (2013).

Mineral Safeguarding

- 2.16** The British Geological Survey (BGS), with The Coal Authority published, *Mineral Safeguarding in England: Good Practice Advice*⁽⁷⁾ in 2011. This good practice advice was released prior to the publication of the NPPF but remains the latest guidance on mineral safeguarding. It focuses solely on surface-won mineral development. Potential approaches that the council could take to safeguard mineral resource, taking into account this guidance, are outlined in 'Safeguarding'.

Onshore Oil and Gas

- 2.17** CLG issued the *Planning Practice Guidance for Onshore Oil and Gas* in July 2013. This guidance has since been republished in the National Planning Practice Guidance, and states that local authorities should include the following in their local plans:
- Petroleum Licence Areas should be shown on proposals maps; and,
 - Criteria-based policies for each of the exploration, appraisal and production phases of hydrocarbon extraction should be outlined⁽⁸⁾.

7 Wrighton, C. E., McEvoy, F. M. & Bust, R. (2011). *Mineral Safeguarding in England: Good Practice Advice*. British Geological Survey Open Report, OR/11/046.

8 CLG (2013). *Planning practice guidance for on-shore oil and gas*. CLG: London, England. Page 5.

Evidence

Our evidence base

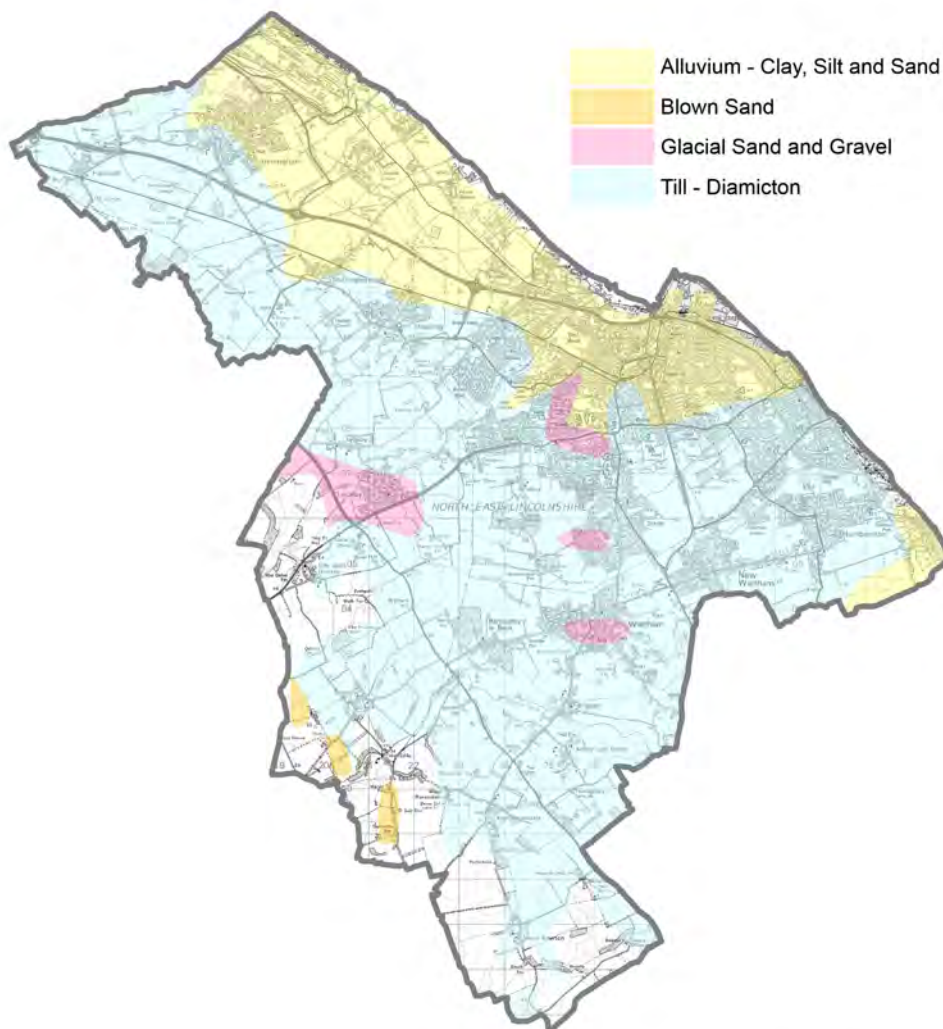
The key documents that form the minerals evidence base are:

- Andrews, I. J. (2013). The Carboniferous Bowland Shale gas study: geology and resource estimation. British Geological Survey for the Department of Energy and Climate Change: London, England.
- East Riding of Yorkshire Council, Hull City Council, North East Lincolnshire Council & North Lincolnshire Council (2014). Humber Area Local Aggregate Assessment. North Lincolnshire Council: Scunthorpe, England. - DRAFT
- English Heritage (2012). Strategic Stone Study: A Building Stone Atlas of East Yorkshire & North & North East Lincolnshire. English Heritage: London, England.
- Harrison, D. J. et al (2005). Mineral Resource Information for National, Regional and Local Planning: Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull). British Geological Survey Commissioned Report CR/04/227N.
- McEvoy, F., Steadman, E. J., Harrison, D. J. & Cooper, A. (2004). Yorkshire and the Humber Region: Sand and gravel resources and environmental assets. British Geological Survey Commissioned Report, CR/04/216N.
- Yorkshire & Humber Aggregate Working Party (2014). Annual Monitoring Report 2013. Chester West & Chester Council: Chester, England.

Geology and Minerals Resource

Geology

- 3.1** The landscape of North East Lincolnshire is flat across the coastal plain, however, it rises to heights of around 100 metres above sea level in the Lincolnshire Wolds. This area is characteristic of a chalk downland area; it is underlain by white chalk, which forms the dominant bedrock geology of the area. Superficial layers occur on the surface of this chalk bedrock, including alluvium comprising clay, silt and sand; glacial till, and sand, and gravels deposited by glaciers.



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Figure 3.1 Superficial Geology

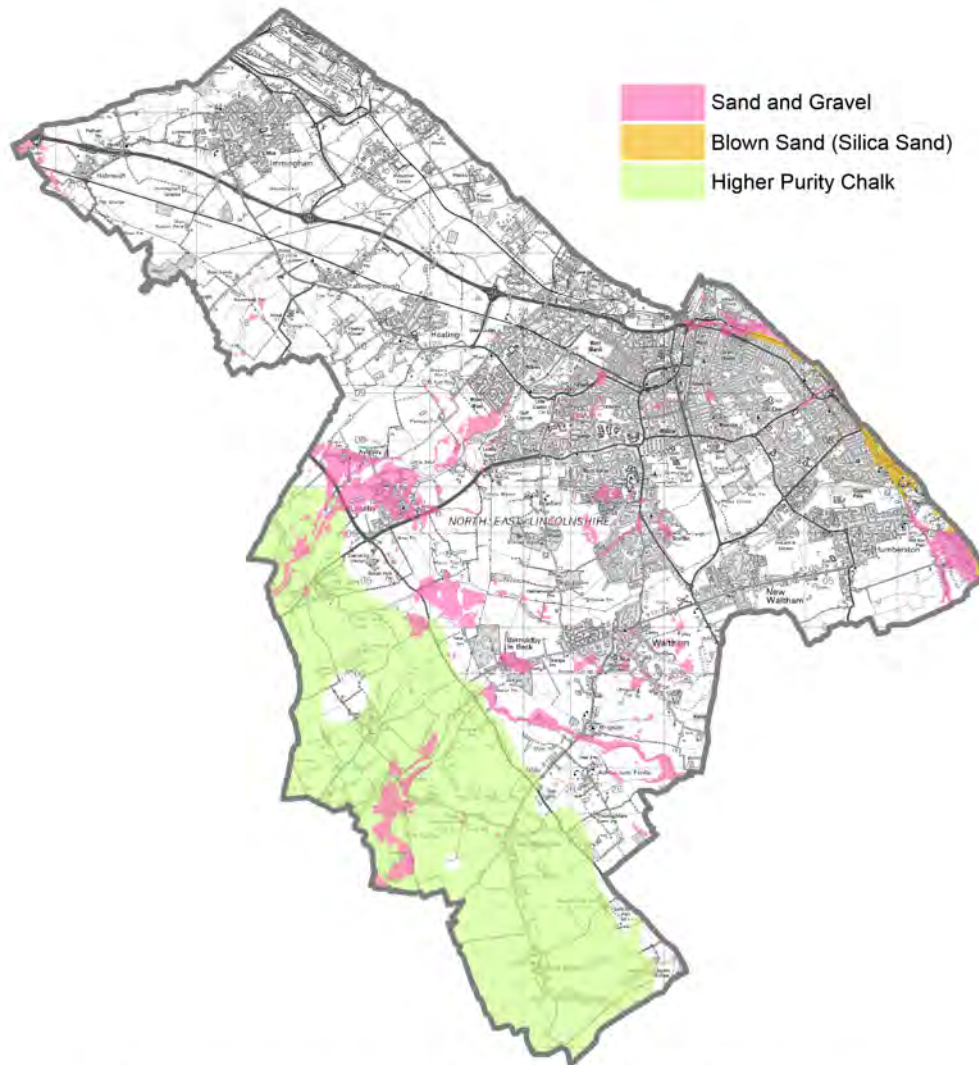
Mineral Resources

Minerals are defined as;

A concentration or occurrence of material of economic interest in or on the earth's crust in such a form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location quantity, grade, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological knowledge⁽⁹⁾.

- 3.2 The British Geological Survey (BGS) report on mineral resource in Humberside and accompanying map (2005)⁽¹⁰⁾, identifies the types of minerals and their extent in North East Lincolnshire. The report provides some evidence of the quality of the identified resources.
- 3.3 The BGS has made a number of minor changes to the underlying dataset since its publication in 2005, and the council accessed updated data from BGS in January 2014. Figure 3.2 'Minerals Resource' shows the extent of economic minerals resource based on this updated dataset.
- 3.4 The BGS identified that North East Lincolnshire has deposits of sand and gravel, blown sand (silica sand) and higher purity chalk. It should be noted that all minerals identified are 'inferred' resources. This means that there is a low level of confidence in estimations of the tonnage, grade and mineral content.

9 *Pan-European Code for Reporting of Exploration Results, Mineral Resources and Reserves* (The PERC Reporting Code); Pan-European Reserves Resources Reporting Committee (PERC) (2009).
10 Harrison, D. J. et al (2005). Mineral Resource Information for National, Regional and Local Planning: Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull). British Geological Survey Commissioned Report CR/04/227N.



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Figure 3.2 Minerals Resource

Sand and Gravel

- 3.5** Superficial deposits of sand and gravel occur in North East Lincolnshire which comprise of glaciofluvial deposits (deposited by streams from glaciers), sub-alluvial river terrace deposits (deposited by rivers), and shore and beach deposits.

- 3.6** The most significant glaciofluvial deposits of sand and gravel occur in an area between Habrough and Laceby, where BGS data shows that up to 15 metres of well sorted sand with interbedded chalk and flint gravels overlie tills⁽¹¹⁾⁽¹²⁾. Some of these deposits are suspected of being unsuitable for use as concreting aggregate⁽¹³⁾.
- 3.7** North East Lincolnshire currently has no sand and gravel workings. The council's records show that sand and gravel extraction has been consented at two sites in the past.
- Planning permission was granted in 1948⁽¹⁴⁾ for the extraction of sand and gravel at Aylesby Gravels, off Cooper Lane, in Laceby. The application stated that sand, gravel and stone would be worked at the site. Planning permission was later approved for the infilling of the site with industrial waste⁽¹⁵⁾.
 - Planning permission was granted in 1948⁽¹⁶⁾ for the extraction of sand and gravel at Aylesby Sand and Gravel Pit, located west of Barton Street (A18), near Laceby and an extension to the activity granted in 1960⁽¹⁷⁾. Planning permission was granted in 1967 for the infilling of the site with inert and insoluble waste material⁽¹⁸⁾.
- 3.8** Historic working has also occurred in the borough prior to the introduction of the planning system. Historic Ordnance Survey maps from the late 1800's and early 1900's show the presence of a number of sand and gravel quarries located near Aylesby, East Ravendale, Irby upon Humber, Laceby, Little Coates and Wold Newton.
- 3.9** Aggregates such as sand and gravel deposits are considered to be locally and nationally important.

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- 11 Harrison, D. J. et al (2005). *Mineral Resource Information for National, Regional and Local Planning: Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull)*. British Geological Survey Commissioned Report CR/04/227N.
- 12 McEvoy, F., Steadman, E. J., Harrison, D. J. & Cooper, A. (2004). *Yorkshire and the Humber Region: Sand and gravel resources and environmental assets*. British Geological Survey Commissioned Report, CR/04/216N. Page 27
- 13 McEvoy, F., Steadman, E. J., Harrison, D. J. & Cooper, A. (2004). *Yorkshire and the Humber Region: Sand and gravel resources and environmental assets*. British Geological Survey Commissioned Report, CR/04/216N. Page 27
- 14 Reference 53/48.
- 15 Reference 142/54.
- 16 Reference GY/54/48.
- 17 Reference 260/60.
- 18 Reference 728/67.

Blown Sand (Silica Sand)

- 3.10** North East Lincolnshire has sparse deposits of silica sand, an industrial mineral, located along the east coast in the Cleethorpes area. The deposits are identified as being generally thin, mostly less than 2m, but locally up to 5m thick⁽¹⁹⁾. Silica sands are not used for construction purposes but for industrial processes including, within the glass and foundry casting industries, as well as the ceramics and chemicals manufacturing industries.
- 3.11** Due to their high silica content and lack of impurities, silica sands command a higher price than construction sands; which allows them to serve a wider geographical market than other sands and gravels. In the UK, silica sand occurs in limited areas and quantities.
- 3.12** Silica sand deposits are considered to be important both locally and nationally, particularly those that are considered to be of a high grade, and in light of the limited extent of deposits.
- 3.13** North East Lincolnshire has no current or known historic silica sand workings. The extraction of silica sand does occur in the neighbouring local authority area of North Lincolnshire, where sizeable deposits exist.

Chalk

- 3.14** An extensive chalk resource exists in the west of the borough in the Lincolnshire Wolds. This chalk is hard and does not contain the moisture found in chalk in southern parts of England, therefore making it of value as an aggregate for less demanding applications including fill and sub-base roadstone⁽²⁰⁾.
- 3.15** The chalk resource in North East Lincolnshire is of a high purity (>97% CaCO₃), however, much of the resource is concealed below extensive superficial (surface) drift deposits, which thicken towards the east.
- 3.16** Chalk extraction occurs in neighbouring local authority areas including Lincolnshire, North Lincolnshire and the East Riding of Yorkshire for use in a wide variety of processes including agriculture, construction, lime production, steel manufacture and cement manufacture.

19 McEvoy, F., Steadman, E. J., Harrison, D. J. & Cooper, A. (2004). *Yorkshire and the Humber Region: Sand and gravel resources and environmental assets*. British Geological Survey Commissioned Report, CR/04/216N.

20 Harrison, D. J. Et al (2005). *Mineral Resource Information for National, Regional and Local Planning: Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull)*. British Geological Survey Commissioned Report CR/04/227N.

- 3.17** Chalk is not currently extracted in North East Lincolnshire. The council's records do not record any applications for consent to extract the mineral.
- 3.18** Historic working has occurred in the borough prior to the introduction of the planning system. Ordnance Survey maps from the late 1800s and early 1900s show the presence of a number of small chalk pits across the Lincolnshire Wolds area where chalk was extracted for use as agricultural lime and hardcore⁽²¹⁾. This included workings located near to the settlements of Aylesby, Barnoldby Le Beck, Beelsby, East Ravendale, Hatcliffe, Haverby cum Beesby, Irby upon Humber, Laceby, West Ravendale and Wold Newton.
- 3.19** While chalk, like any other mineral, is a finite resource, it occurs extensively in North East Lincolnshire and across neighbouring local authority areas. It is not considered to be a mineral of local or national importance.

Brick Clay

- 3.20** The BGS data does not identify alluvium/tidal flat deposits of brick clay in North East Lincolnshire. This resource is only identified in areas where it is actively worked. Brick clay has previously been extracted from one recorded site, Humberston Brickworks, located to the west of Humberston at Wilton Road.
- 3.21** A historic planning application, for the continuation of mineral working and extension of the site, made in 1951, states that the extraction of brick earth commenced at the site in 1932⁽²²⁾. Aerial photography from the 1940's shows the site being worked. Working has since ceased at the site and an industrial estate has since occupied the land for a considerable length of time.

Building Stone

- 3.22** English Heritage undertook a *Strategic Stone Study* covering East Yorkshire, Hull, North Lincolnshire and North East Lincolnshire. This document did not identify any building stone sources in North East Lincolnshire and identified limited use of building stone in the local vernacular building construction.

21 Harrison, D. J. et al (2005). *Mineral Resource Information for National, Regional and Local Planning: Humberside (comprising East Riding of Yorkshire, North Lincolnshire, North East Lincolnshire and City of Kingston upon Hull)*. British Geological Survey Commissioned Report CR/04/227N.

22 Reference GY/74/51.

- 3.23** Buildings constructed of chalk in North East Lincolnshire are rare.⁽²³⁾ However, Wold Newton is highlighted as an area where chalk has historically been used in the construction of buildings. The village has also seen the use of sandstone⁽²⁴⁾.
- 3.24** Additionally, flint nodules are used extensively in the fabrics of some churches, for example at Barnoldby Le Beck, Ashby cum Fenby and Hatcliffe⁽²⁵⁾. Limestone from Tealby in West Lindsey features in buildings constructed in Hatcliffe and Wold Newton⁽²⁶⁾.

Oil and Gas (including Shale Gas)

- 3.25** Oil and gas development occurs in three phases: exploration, in which an operator seeks to identify a resource; appraisal, where a discovered resource is tested; and the production phase, in which a resource is extracted.
- 3.26** The exploratory, appraisal or production phase of hydrocarbon extraction can only take place in areas where the Department for Energy and Climate Change (DECC) has issued a licence under the Petroleum Act 1998⁽²⁷⁾. Each phase also requires a separate planning permission.
- 3.27** A Petroleum Licence covers part of North East Lincolnshire. The extent of this licence is illustrated in Figure 3.3 'Oil and Gas Licence Area'. This licence (PEDL181) was awarded through the 13th onshore licensing round in 2008 and has a six year initial term which expires in 2014.
- 3.28** To date, the council has not been notified of any successful exploration and appraisal work within the local authority boundary and, as a result, no oil or gas discoveries have been made in North East Lincolnshire. No sites in North East Lincolnshire have planning permission to extract conventional hydrocarbons such as oil and gas, or unconventional hydrocarbons such as shale gas.

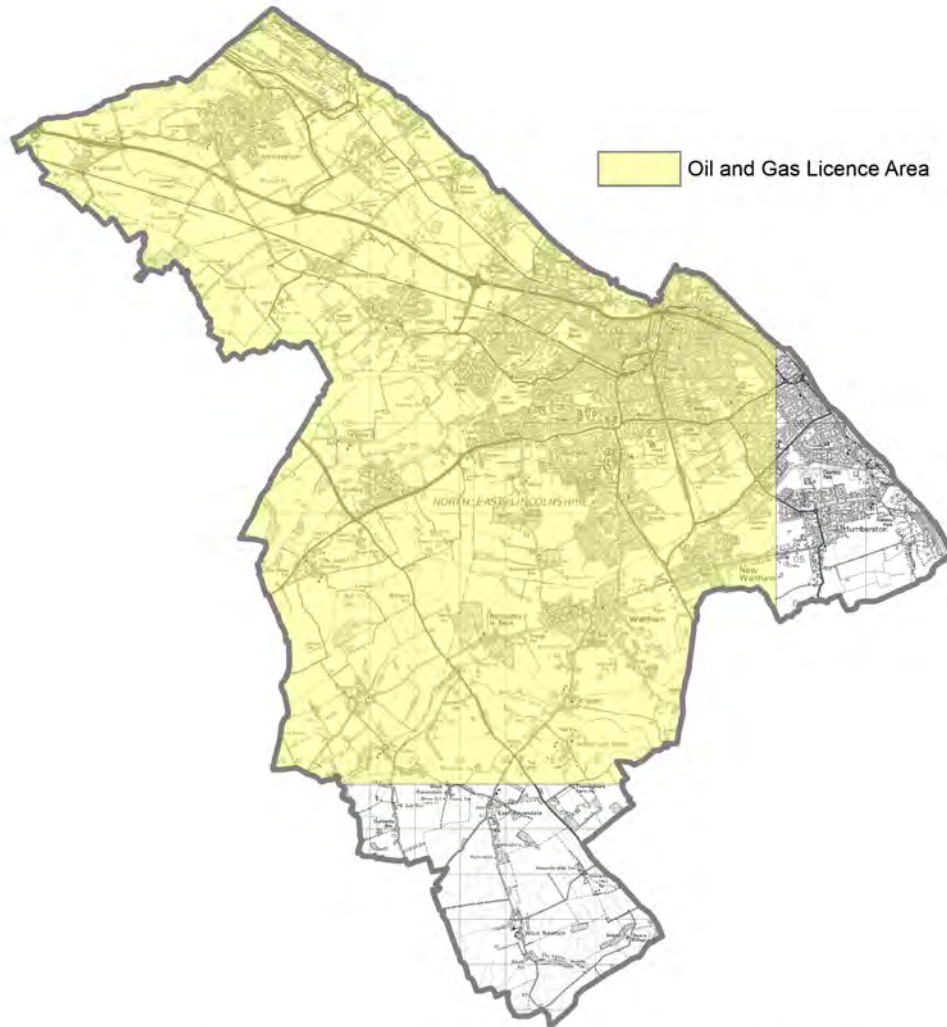
23 English Heritage (2012). *Strategic Stone Study: A Building Stone Atlas of East Yorkshire & North & North East Lincolnshire*. English Heritage: London, England. Page 7.

24 English Heritage (2012). *Strategic Stone Study: A Building Stone Atlas of East Yorkshire & North & North East Lincolnshire*. English Heritage: London, England. Page 13.

25 English Heritage (2012). *Strategic Stone Study: A Building Stone Atlas of East Yorkshire & North & North East Lincolnshire*. English Heritage: London, England. Page 8

26 English Heritage (2012). *Strategic Stone Study: A Building Stone Atlas of East Yorkshire & North & North East Lincolnshire*. English Heritage: London, England. Page 14.

27 Operators are also required to seek permits and approvals from the Environment Agency and Health and Safety Executive.



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Data supplied by the Department of Energy and Climate Change.

Figure 3.3 Oil and Gas Licence Area

- 3.29** Shale gas is a methane found in rocks which can be released through a process known as hydraulic fracturing, which is more commonly referred to as fracking.
- 3.30** The Government published an assessment of shale gas resource in July 2013. The research which was undertaken by the British Geological Survey on behalf of DECC assessed the Yorkshire and Humber region. The report does not identify significant potential for shale gas resource within the North East Lincolnshire boundary⁽²⁸⁾.

28 Andrews, I. J. (2013). *The Carboniferous Bowland Shale gas study: geology and resource estimation*. British Geological Survey for the Department of Energy and Climate Change: London, England. Page 2.

- 3.31** It should however be noted that the full extent and location of shale gas resource is unclear. It is uncertain as to whether shale gas extraction in the area would be financially viable and it stills remains uncertain as to whether or not the geology of the area is suitable for such activity to take place.

Coal

- 3.32** BGS data identifies that the North East Lincolnshire area is underlain by coal, which exists at depths of greater than 500 metres. There is no evidence of historic coal working within the authority area. The council has received written confirmation from The Coal Authority that there are no considerations required to be made in the local plan with regards to coal safeguarding or extraction.

Other Resources

- 3.33** No other mineral resources have been identified through BGS data.

Mineral Supply

Sub-Regional Supply

- 3.34** The partially revoked *Yorkshire and Humber Plan Regional Spatial Strategy to 2026* (RSS) outlined the Yorkshire and Humber's regional apportionment, divided on the basis of historic shares in aggregate production. The apportionment figures are provided in Table 3.1 'The Humber Sub-Regional Aggregate Apportionment 2001 to 2016'.

The Humber Sub-Regional Aggregate Apportionment 2001 to 2016 (million tonnes) ⁽¹⁾		
Area	Land-won sand and gravel	Land-won crushed rock
East Riding	8.3	5.3
North Lincolnshire	4.1	2.6
Other	-	-
Humber Total	12.4	7.9

Table 3.1 The Humber Sub-Regional Aggregate Apportionment 2001 to 2016

1. The Yorkshire and Humber Plan Regional Spatial Strategy to 2026 (DCLG, May 2008)

- 3.35** North East Lincolnshire has contributed no primary land-won aggregates to supply in recent years and as a result there was no expectation that the area should contribute to supply, therefore no apportionment was made.

Humber Area Local Aggregates Assessment

- 3.36** Local authorities are now required by the NPPF to assess the local need for aggregates on an annual basis by undertaking a Local Aggregate Assessment (LAA)⁽²⁹⁾. North East Lincolnshire Council has worked collaboratively with East Riding of Yorkshire, Hull City and North Lincolnshire Councils to produce a LAA covering the Humber area.
- 3.37** The LAA is based on a rolling average of aggregates sales data from the preceding 10 years, plus any other relevant local information. LAAs should provide an assessment of all supply options for aggregates: primary, secondary, recycled and marine dredged.
- 3.38** The Humber LAA forecasts that existing sites and reserves within the area will not provide the quantity of aggregate required in the period to 2030, and that additional aggregate will be required from either the expansion of existing sites or the formation of new sites. Based on sales trends from the past ten years (2004 to 2013), the Humber area has had an aggregate requirement of circa 1.2 million tonnes per annum, which increases to 1.38 million tonnes per annum when marine aggregates are included.

Future Aggregate Requirements for the Humber Area 2012 to 2030 (million tonnes) ⁽¹⁾		
	Sand and Gravel	Crushed Rock
Annual Aggregate Requirement - based on 10 year average sales (2004 to 2013)	0.97	0.23
Aggregate Requirement 2012 to 2030 - Annual requirement x 19 years	18.43	4.37
Current Reserves	7.48	5.7
Surplus/Deficit (Current Reserves - Aggregate Requirement)	-10.95	1.23

Table 3.2 Future Aggregate Requirements for the Humber Area 2012 to 2030

1. Humber Area Local Aggregate Assessment (East Riding of Yorkshire Council, Hull City Council, North East Lincolnshire Council and North Lincolnshire Council; 2014 DRAFT)

29 Paragraph 145, *National Planning Policy Framework*

- 3.39** As of December 2013 there is sufficient consented reserves of sand and gravel to maintain the seven year landbank required by the NPPF⁽³⁰⁾. There are sufficient reserves in the Humber area to maintain the required ten year landbank for crushed rock.
- 3.40** Table 3.2 'Future Aggregate Requirements for the Humber Area 2012 to 2030' shows that consented reserves in the Humber sub-region are capable of meeting 40.5 per cent of the demand for sand and gravel, leaving a 10.95 million tonne shortfall in supply in the period to 2030.
- 3.41** A surplus in crushed rock supply is anticipated by 2030, of 1.23 million tonnes. Previous estimates of crushed rock sales have been over-estimated and changes in the way that data for crushed rock is collected from 2004 onwards has addressed this issue. The 2002 and 2003 data included circa 2 million tonnes of crushed rock which was used for non-aggregate purposes.
- 3.42** Meeting the long term shortfall in supply will require further supplies of sand and gravel to be identified in development plans.

Marine Aggregates Study

- 3.43** URS undertook a *Marine Aggregates Study* commissioned by Leeds City Council on behalf of MPAs in the Yorkshire and Humber region. The final report was published in January 2014. The report provides an assessment of the potential for the Yorkshire and Humber region to accommodate a substantial increase in the supply of marine aggregates.
- 3.44** The study concluded that the Ports of Hull and Immingham are the only facilities capable of accommodating larger dredging vessels for the landing of marine won aggregates, however, the report highlighted a number of private wharves with the potential to accommodate vessels of a smaller scale.
- 3.45** The Port of Immingham has the potential for marine dredged aggregate landing of a significant scale and that the short to medium term one rail-linked location could become available to accommodate an aggregate wharf⁽³¹⁾.

Production in North East Lincolnshire

- 3.46** Monitoring of the production of aggregates in North East Lincolnshire is undertaken through an annual survey of known operators producing primary, secondary and recycled aggregates. The landing of marine dredged aggregates is monitored by the Crown Estate and an annual update is published online. North East Lincolnshire's

30 Paragraph 145, *National Planning Policy Framework*, CLG (2012).

31 *Marine Aggregates Study*, URS (2014).

contribution to aggregate supply since 2009 is shown in Table 3.3 'Aggregates supplied by North East Lincolnshire'. This data is reported to the Yorkshire and Humber Aggregate Working Party (AWP).

Aggregates supplied by North East Lincolnshire (Tonnes) ⁽¹⁾⁽²⁾					
Aggregates Supplied	2009	2010	2011	2012	2013
Primary land won	Nil	Nil	Nil	Nil	Nil
Secondary and recycled	c48,000	c45,000	c53,500	c69,150	c57,400
Marine dredged	Nil	Nil	Nil	Nil	Nil

Table 3.3 Aggregates supplied by North East Lincolnshire

1. Source: Survey of Operators - totalled annual production from identified main producers active in North East Lincolnshire
2. Secondary and recycled aggregate figures represent three known producers between 2009 and 2011, and two known producers from 2012 onwards.

3.47 North East Lincolnshire does not currently contribute to the supply of primary land-won aggregates but has increased contribution through the production of secondary and recycled aggregates in recent years. The area does not currently contribute to the supply of marine aggregates.

Safeguarding

Background

3.48 The *National Planning Policy Framework* (NPPF) requires local planning authorities in preparing local plans to: "define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that resources defined will be worked"⁽³²⁾. The NPPF continues to say that local authorities should: "set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place"⁽³³⁾.

32 Paragraph 143, *National Planning Policy Framework*.

33 Paragraph 143, *National Planning Policy Framework*.

- 3.49** A Minerals Safeguarding Area (MSA) is an area of land overlying (or within the immediate vicinity) of a known mineral resource that is defined on a map. They are recognised through a supporting policy as an area where the presence of an economic mineral resource, should be considered where an application for non-mineral development is submitted for determination⁽³⁴⁾.
- 3.50** Importantly, MSAs are a designation, not an allocation; there is no presumption that planning permission will be granted for mineral working where they have been defined. By ensuring that the presence of a mineral resource is considered in the determination of applications for non-mineral development, MSAs seek to ensure that finite mineral resources are not needlessly sterilised⁽³⁵⁾ by surface development overlying or situated close to the boundary of the resource. MSAs therefore do not preclude other forms of development from being permitted, but ensure that the presence of a mineral resource is taken into account during the decision making process.

Interpreting the requirement to safeguard mineral resources	
The NPPF says that in preparing local plans, local planning authorities should...	Interpretation
define Mineral Safeguarding Areas...	A Mineral Safeguarding Area (MSA) is defined in the NPPF as an area designated by a Minerals Planning Authority which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development.
and adopt appropriate policies...	It is for the authority to determine what it considers to be an appropriate approach in North East Lincolnshire.
in order that known locations of...	The authority must have evidence of the location of resources.
specific mineral resources...	Minerals resources are natural concentrations of minerals such as aggregates or bodies of rock that are, or may become, of potential economic interest due to their inherent properties. The mineral should also exist in sufficient quantity to make it of intrinsic economic interest.

34 Wrighton, C. E., McEvoy, F. M. & Bust, R. (2011). *Mineral safeguarding in England: good practice advice*. British Geological Survey Open Report, OR/11/046. Page 45.

35 Sterilisation is the term used to describe loss of access to a mineral resource.

Interpreting the requirement to safeguard mineral resources	
The NPPF says that in preparing local plans, local planning authorities should...	Interpretation
of local and national importance...	Minerals of local and national importance are defined in the NPPF as minerals which are necessary to meet society's needs, including aggregates, brickclay (especially Etruria Marl and fireclay), silica sand (including high grade silica sands), cement raw materials, gypsum, salt, fluorspar, shallow and deep-mined coal, oil and gas (including hydrocarbons), tungsten, kaolin, ball clay, potash and local minerals of importance to heritage assets and local distinctiveness.
are not needlessly sterilised.	This suggests that minerals can be sterilised as long as this happens in the course of meeting a defined need.

Table 3.4 Interpreting the requirement to safeguard mineral resources

- 3.51** The existing saved Policy MW6 of the *North East Lincolnshire Local Plan* (2003) provides a basis for mineral safeguarding but does not designate specific areas or resources.
- 3.52** In addition to adopting policies to safeguard mineral resources, local planning authorities should safeguard infrastructure associated with the transportation of minerals, including rail heads, rail links and wharfage, plus existing sites which handle, process and distribute substitute, recycled and secondary aggregate material⁽³⁶⁾.
- 3.53** The British Geological Survey (BGS) recommend a seven stage methodological approach to defining MSAs. This has however been amended to a six stage process to reflect North East Lincolnshire Council's status as a unitary authority⁽³⁷⁾.

³⁶ Paragraph 143, *National Planning Policy Framework*.

³⁷ The BGS methodology stages is considered to be more appropriate for two-tier local authority areas.

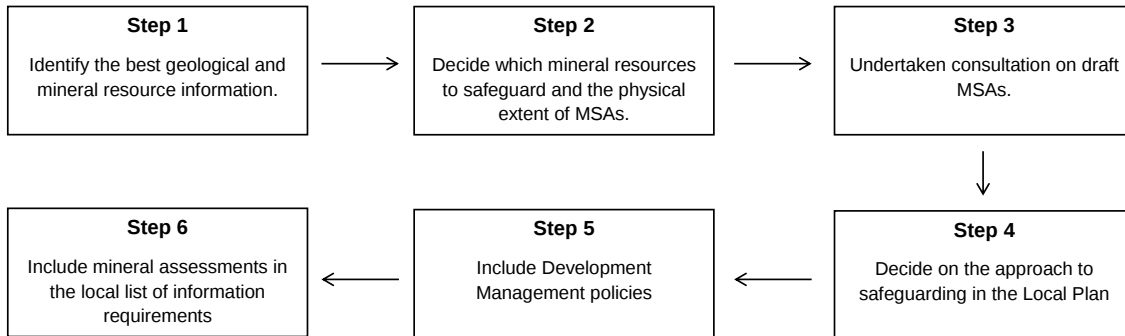


Figure 3.4 Mineral Safeguarding Methodology

3.54 Latter stages of the methodology stages will be undertaken following consultation of draft MSAs and following the Sustainability Appraisal of options.

Geological and mineral resource information

3.55 The British Geological Society's (BGS) minerals resource information is considered to provide the most up to date and appropriate data on the location, extent and quality of minerals resource in North East Lincolnshire. Owing to a lack of primary extraction, there is no data available from minerals operators.

Mineral resources and the extent of MSAs

3.56 Aggregates, such as sand and gravel, and the industrial mineral silica sand, are the only minerals identified in North East Lincolnshire which are of local and national importance, as defined in the NPPF.

3.57 There is a clear need for aggregate minerals and an identified shortfall in the Humber area to 2030. Furthermore, silica sand deposits do not occur extensively and their scarcity increases the importance to safeguard resources which may be viable for extraction in the future.

3.58 Chalk is not specifically identified as a resource of local and national importance. While chalk has found application in use as building material in North East Lincolnshire, the extent of this is very limited. Furthermore, chalk deposits occur extensively over the plan area, and in neighbouring areas including the East Riding of Yorkshire, Lincolnshire and North Lincolnshire. There is no identified requirement for chalk in the local area.

3.59 There is a level of uncertainty regarding the quality and reliability of the resources identified by the BGS owing to their status as inferred resources. Inferred resources are identified by the BGS through available geological evidence which may include outcrops, trenches, pits, working and drill holes. While there is a level of uncertainty

about the quality, quantity and reliability of the resources identified, there is equally an absence of evidence to suggest that the resources could not be of economic value in the future.

- 3.60** Inferred resources as delineated in the BGS dataset is sufficient information for the designation of MSAs. The council should therefore apply the precautionary principle and consider the designation of the full extent of important minerals resource.

Identification of resource ⁽¹⁾	
Inferred Mineral Resource	A Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which is limited or of uncertain quality and reliability.
Indicated Mineral Resource	A Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Measured Mineral Resource	A Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Table 3.5 Identification of resource

1. Pan-European Code for Reporting of Exploration Results, Mineral Resources and Reserves (The PERC Reporting Code); Pan-European Reserves Resources Reporting Committee (PERC) (2009).

- 3.61** The council should also consider whether a buffer should be applied to any designated MSAs to ensure that non-mineral development in close proximity to identified resources would not unintentionally sterilise a resource.

Key issues for North East Lincolnshire

- 4.1** This issues paper has highlighted a number of challenges to overcome in North East Lincolnshire to ensure a sustainable supply of minerals and to secure the long-term conservation of mineral resources. Whilst it is important to identify and address these, it is also important to recognise the opportunities that this presents to North East Lincolnshire.

Bringing the evidence together

- 4.2** The requirement to safeguard mineral resources from unnecessary sterilisation presents a conflict between the need to preserve mineral resources and the requirement to meet needs through future growth, for example, housing.
- 4.3** It needs to be determined whether or not the introduction of such a policy would increase the burden on developers to such an extent that it threatened the ability of non-minerals development to be developed viably. The NPPF requires that the sites and scale of development identified in the plan should not be subject to a prohibitive scale of policy burden⁽³⁸⁾.
- 4.4** North East Lincolnshire faces a considerable challenge in contributing to minerals supply. The area currently brings energy minerals to market through their importation at the Port of Immingham, as well as contributing a gradually rising quantity of secondary and recycled aggregates⁽³⁹⁾. The area does not contribute to the supply of primary land-won aggregates and is reliant on neighbouring areas for the supply of these materials.
- 4.5** Contribution to supply could be met through a variety of options, including seeking interest from the minerals industry to bring forward primary sites, a significant increase in the quantity of secondary and recycled aggregates produced, or through the provision of appropriate infrastructure to allow the Ports to receive marine dredged aggregates.
- 4.6** Should these options prove to be unsustainable or undeliverable, North East Lincolnshire will be reliant on neighbouring local authority areas to increase supply from primary sources.

Conclusions

- 4.7** It is clear that the consideration of future spatial options will need to balance and address a range of different issues, including issues affecting other areas of the plan. Key amongst them is the need to:

38 Paragraph 173, *National Planning Policy Framework*, CLG (2012).

39 An increase in recycled aggregates will contribute to meeting sustainability objectives and increase the quantity of waste managed in a sustainable manner.

Issue 1

Address the NPPF requirement to safeguard minerals resource

In recognition of the important role that minerals play in sustaining our way of life, provision will need to be made to safeguard specific minerals resources of local and national importance, to ensure that minerals are not needlessly sterilised. The council will need to consider what impact the designation of minerals safeguarding areas could have on other areas of the plan and meeting needs. The designation will also need to consider whether buffer zones are appropriate.

Issue 2

Ensure minerals related infrastructure is safeguarded

To ensure that minerals can continue to reach the market it will be essential to outline how important infrastructure used for the transportation and handling of minerals will be safeguarded.

Issue 3

Contribution to the supply of aggregates

North East Lincolnshire's role in contributing to the supply of aggregates will need to be defined, considering whether this will be through primary, secondary, recycled and/or marine-dredged sources. There will be a specific need to demonstrate co-operation between North East Lincolnshire and neighbouring authorities in addressing a shortfall in aggregate supply.

Issue 4

Establishing appropriate criteria-based policies and meeting sustainability objectives

There is a need to outline how minerals proposals will be considered with regards to their environmental impact, proposals for aftercare and restoration, impact on designated sites, and promoting the sustainable transportation of minerals. Specific criteria for hydrocarbon exploration, appraisal and extraction should be considered particularly with regards to water quality and health and safety issues.

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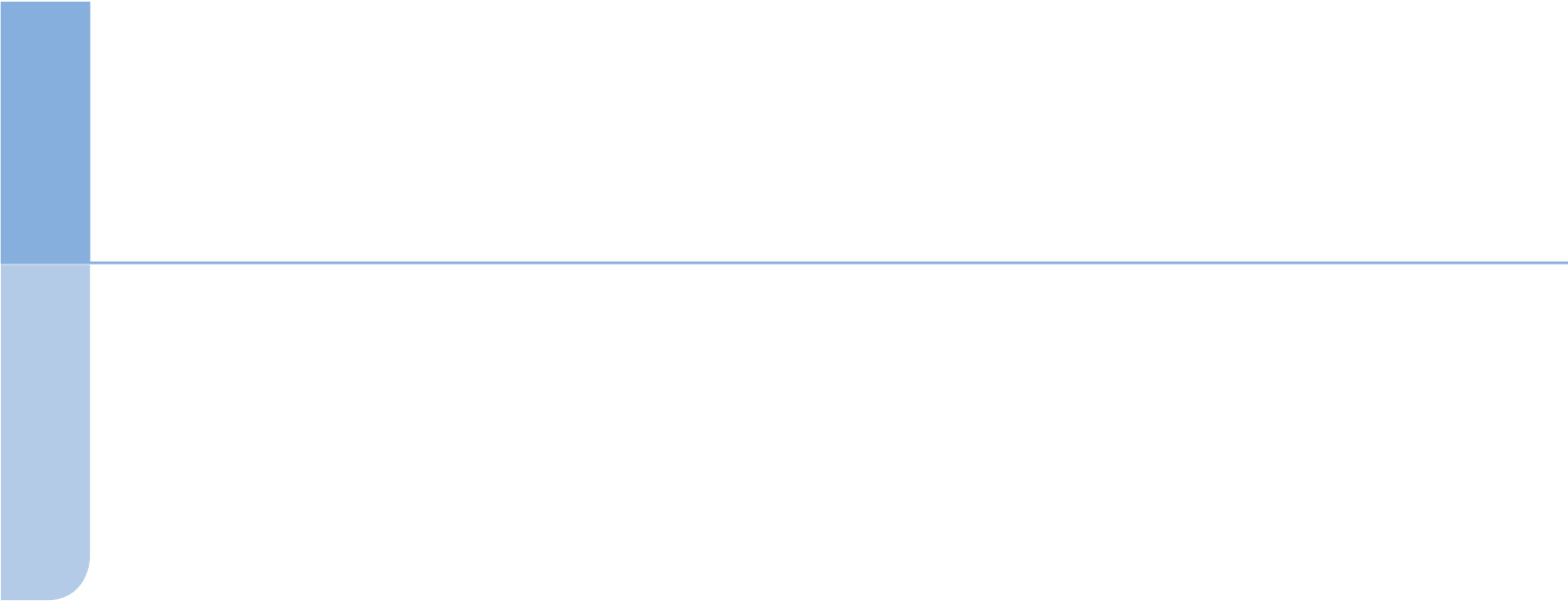
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Document Availability

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Spatial Planning Team
Tel: (01472) 323370 / 325953 / 324272
Email: newlocalplan@nelincs.gov.uk

Spatial Planning
Cofely
Origin One
1 Origin Way
Grimsby
North East Lincolnshire
DN37 9TZ

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