

North York Moors National Park Authority

Minerals Technical Paper

October 2015

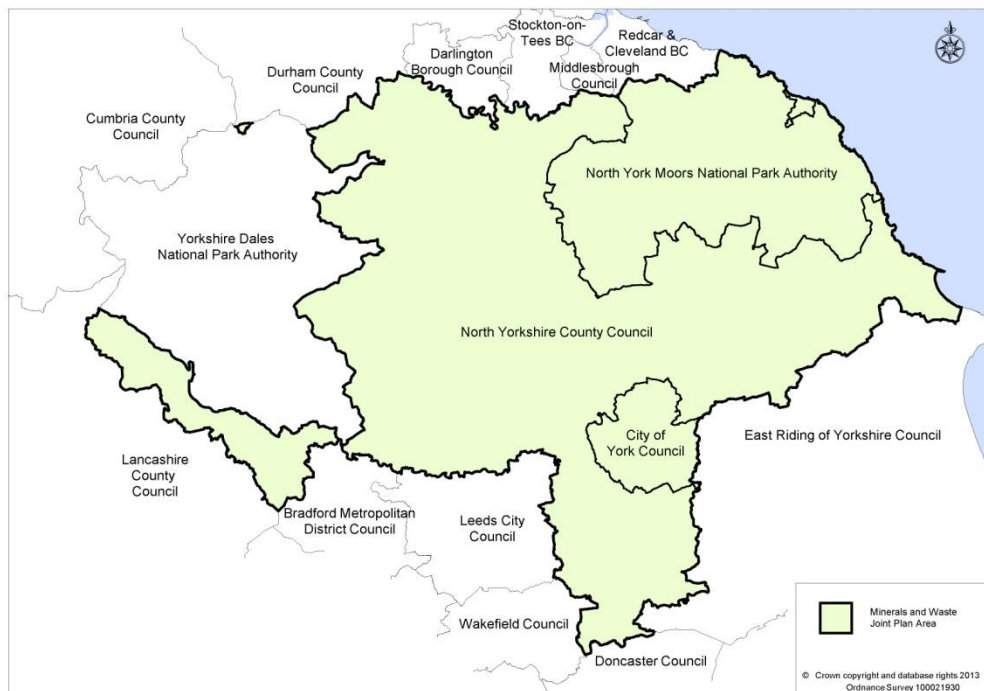
**Produced as part of the evidence base for the
Minerals and Waste Joint Plan**

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1. Introduction

- 1.1 The North York Moors National Park Authority is the Minerals Planning Authority for the National Park. The Authority has embarked upon the preparation of the Joint Minerals and Waste Plan (JMWP) with North Yorkshire County Council and the City of York Council. North Yorkshire County Council is the Minerals Planning Authority for the area of the county outside of the two National Parks. The Joint Plan area is shown on Map 1 below. Note that this technical paper only relates to the North York Moors National Park.



Map 1: Minerals and Waste Joint Plan area

- 1.2 This Minerals Technical Paper provides an outline of some of the main evidence relevant to the North York Moors National Park that will inform the North Yorkshire Joint Minerals and Waste Plan. This will complement similar papers compiled by the other two authorities involved in the production of the Joint Plan.
- 1.3 Planning authorities should base their plans upon adequate, up-to-date and relevant evidence¹. For a minerals and waste plan this evidence will be specific to the topic area and will not therefore cover all of the types of evidence referred to in the NPPF. This paper should be read alongside any additional minerals related evidence that is produced as part of the plan production process and the general contextual evidence. This is available at <http://www.northyorks.gov.uk/index.aspx?articleid=12375>.
- 1.4 This Technical Paper is intended to be a factual account and not an expression of policy. In this respect it has not been published for consultation, although any comments on its content are welcomed (see contact details at the end of the Paper). It is important for the evidence upon which the Plan relies to be up to date and therefore it is intended that this Paper will be updated throughout the process of Plan production.

¹ National Planning Policy Framework (CLG, 2012)

- 1.3 In addition to a technical account of the mineral resources that exist in the Park or are relevant to the Park, the paper also considers the broader policy context within which new planning policies for minerals will be framed. In most cases the broader policy context is the National Planning Policy Framework (and its Technical Guide). A small number of Minerals Planning Guidance Notes and guidance related to deleted Minerals Policy Statements remain extant – these are listed at Appendix 1.
- 1.4 The sections below consider the planning policy context in relation to any policies for specific minerals. In the context of the National Park it is also relevant to highlight a key area of national planning policy. Specifically, paragraphs 115 and 116 state that great weight should be given to conserving the landscape, scenic beauty, wildlife and cultural heritage in National Parks and that planning permission for major developments should be refused except in exceptional circumstances. There is no precise definition of what constitutes major development but paragraph 5.3 of the North York Moors Core Strategy and Development Policies cites minerals workings as developments which may be classed as major. The National Planning Policy Framework states that consideration of such applications should include an assessment of:
- The need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
 - The cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and
 - Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
- 1.5 The Yorkshire and Humber Regional Spatial Strategy was revoked on 22nd February 2013 and there is therefore no regional planning policy.
- 1.6 Planning policy for the North York Moors National Park is currently contained in the Core Strategy and Development Policies² which was adopted in 2008. The minerals policies in the Joint Minerals and Waste Plan will only be replacing the minerals policies contained within this plan (Core Policy E). The other policies of the Core Strategy, particularly the overarching policy (Core Policy A –Delivering National Park Purposes and Sustainable Development), will underpin new policies for minerals and waste. The Core Strategy and Development Policies can be viewed at <http://planning.northyorkmoors.org.uk/ldf/default.aspx>.
- 1.7 A new Management Plan for the National Park was published in 2012. This sets out a strategy, policies, targets and ambitions for the Park in the long term. As the principal policy document for the National Park, this will be a key part of the policy context within which new minerals planning policies will sit. The National Park Management Plan can be viewed at www.northyorkmoors.org.uk/management-plan.
- 1.8 The National Planning Policy Framework requires minerals planning authorities to ‘define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific minerals of local and national importance are not needlessly sterilised by non-mineral development.’ This does not create any presumption that the safeguarded resources are suitable to be worked in planning terms. Minerals Safeguarding Areas for the North York Moors National Park have not

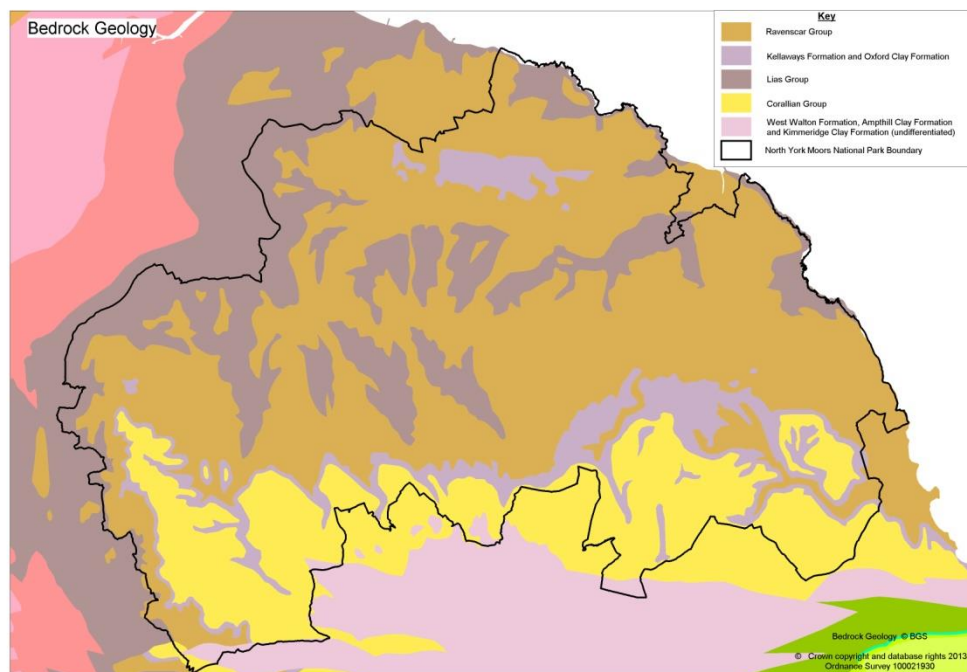
² North York Moors Core Strategy and Development Policies Development Plan Document (North York Moors National Park Authority, 2008)

yet been defined but work is underway to identify these. This paper will be updated once this has been finalised.

2. Geology of the North York Moors National Park

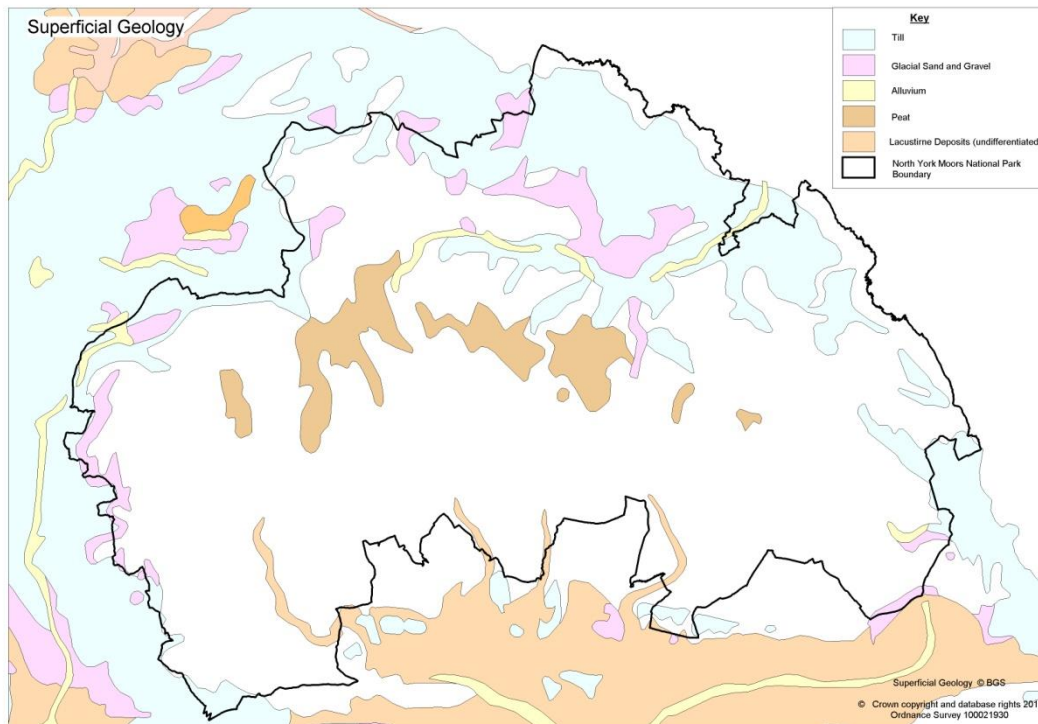
2.1 The map below shows the geology of the Park. The geology of the North York Moors is predominantly of Jurassic age masked in some areas by glacial and periglacial deposits. This is particularly evident along the coast where many of the cliffs are capped with boulder clay.

2.2 Map 2 shows that the underlying geology of the southern area of the Park is predominantly limestone of the Corallian Group. The central, northern and coastal areas are largely made up of sandstone of the Ravenscar Group. Relatively small amounts of sand and gravel deposits exist towards the northern parts of the Park. Small deposits of coal are found around central and northern parts of the Park. A significant area of potash is also found below the surface of the northern and coastal parts of the Park.



Map 2: Bedrock geology

2.3 Map 3 shows the superficial geology overlying the bedrock. This shows areas of peat in the most upland parts of the Park's moorland and areas of sand and gravel deposits in the northern part of the Park and along the western boundary.



Map 3: Superficial geology

2.3 The underlying geology has had an influence on the appearance of the National Park's buildings and villages – limestone and calcareous grit of the upper Jurassic being the main building material in the south of the National Park, with sandstones of the middle Jurassic in the north.

3. Minerals Activity

3.1 This section of the Technical Paper provides an account of the types, locations, use and historic and current activity of minerals which are found with the Park. Although they are present these minerals are not all mined in the Park and there is no presumption that they will be mined in the future. In the interests of good planning it is nevertheless necessary to identify those that exist. The minerals considered in this section are:

- Crushed rock
- Sand and gravel
- Building stone (limestone and sandstone)
- Gas
- Potash
- Salt
- Coal
- Ironstone
- Secondary and recycled minerals
- Marine dredged minerals

The Paper also considers the contribution of marine dredged sand and gravel which is important within North Yorkshire and the Yorkshire and Humber Region and minerals processing activities which take place in the Park.

3.2 **Crushed rock**

What is it?

- 3.2.1 Crushed rock is one of the main forms of aggregate (along with sand and gravel). Aggregates are generally used in construction or can, once treated, be used in road surfacing or concrete production or can be used as construction fill. Crushed rock is produced from either limestone or sandstone and extraction involves surface mining.

Where does it occur?

- 3.2.2 Both sandstone and limestone resources in the Park, as shown on Map 1, have been mined for use as aggregates in the past.

Data and activity

- 3.2.3 Up until 2007, sandstone and limestone were mined for aggregates from Spaunton quarry, and limestone for aggregates from Spikers Hill. The table below shows the output from these quarries up until closure. The output has been zero from 2008 onwards.

Year	Million tonnes
2002	0.3
2003	0.3
2004	0.2
2005	0.1
2006	0.1
2007	0.1
2008	0

Table 1: Production of aggregates from the North York Moors National Park

- 3.2.4 Although aggregates are no longer quarried commercially in the National Park there are a small number of borrow pits which are used by estates for their own use.
- 3.2.5 The two quarries have now closed and restoration schemes have been agreed including the siting of log cabins as tourist accommodation at Spaunton.
- 3.2.6 Planning Authorities are required under the National Planning Policy Framework to produce a Local Aggregate Assessment which contains an assessment of aggregate sales and supply. The Authority has recently produced a Local Aggregate Assessment in partnership with North Yorkshire County Council, the City of York Council and the Yorkshire Dales National Park Authority. The Local Aggregate Assessment identifies that there are no reserves or landbanks within the National Park as there are no commercial aggregates quarries operating.

Policy Context

- 3.2.6 National planning policy in relation to aggregates is contained in the National Planning Policy Framework. Whilst the NPPF requires the provision of landbanks of at least 10 years for crushed rock (based on a rolling average of 10 years sales data), paragraph 144 states that local planning authorities should 'as far as practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks.' The Local Aggregate Assessment does not assume any future supply from within the sub-region's National Parks based upon this element of the National Planning Policy Framework, recognising that this will need to be considered as part of the plan production process.

3.3 Sand and Gravel

What is it?

- 3.3.1 Sand and gravel is used mainly as an aggregate in the construction industry including the making of concrete, mortar and asphalt, and as bulk fill. In England, the majority of sand and gravel is used for making concrete. Sand and gravel are defined by their size – sand being a fine aggregate and gravel being a coarse aggregate.

Where does it occur?

- 3.3.2 Deposits of sand and gravel exist around the Esk Valley area of the National Park. Sand and gravel deposits are superficial surface deposits.

Data and Activity

- 3.3.3 Although there are deposits of sand and gravel in the Esk Valley area and in the north west of the Park, sand and gravel extraction has not taken place within the Park. There is no data on how much sand and gravel is consumed in the North York Moors National Park, but in 2009 a total of 809kt was consumed in the North Yorkshire sub-region.

Policy context

- 3.3.4 Whilst the NPPF requires the provision of landbanks of at least 7 years for sand and gravel (based on a rolling average of 10 years sales data), paragraph 144 states that local planning authorities should ‘as far as practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks.’ As with crushed rock, the Local Aggregate Assessment does not assume any future supply from within the sub-region’s National Parks based upon this element of the National Planning Policy Framework, recognising that this will need to be considered as part of the plan production process.

3.4 ***Building stone***

What is it?

- 3.4.1 Building stone is used in the construction industry for walling, roofing, highways and footpaths and for ornamental purposes. Many types of stone can be used for building, in the North York Moors the predominant building stones are Jurassic limestones and sandstones. Extraction of building stone involves surface mining. Within the National Park it is important for both new building and also for the repair of historic buildings which form part of the National Park’s distinctive special qualities.

Where does it occur?

- 3.4.2 Map 2 above shows the bedrock geology of the Park. Corallian limestone occurs along the southern edge of the Park whilst sandstones from the Ravenscar group are the predominant stone found in the central, northern and coastal parts of the Park.
- 3.4.3 The types of building stones available in and around the National Park have greatly influenced the built environment and the appearance of villages and landscapes across the Park. The built heritage was one of the factors behind the designation as a National Park with the 1947 Hobhouse Report citing a ‘wealth of architectural interest’.
- 3.4.4 The buildings in the south of the Park are characterised by the yellow and pale colours of the limestone whilst those in the north of the Park are characterised by the browner sandstone. Within these broad types there are local variances, for example a pale brown form of limestone called Calcareous Tufa has been extracted from the upper part of the Forge Valley and a yellow-grey sandstone from the Staithes area has been used as flagstones in coastal villages. Stone sourced from in the Park has

also been used in the building and repair of nationally significant buildings and monuments including Whitby Abbey and Guisborough Priory. English Heritage have undertaken a detailed study of building stone sourced from and used in North-East Yorkshire³ which can be viewed at www.bgs.ac.uk/mineralsuk/mines/stones/EH_atlases.html.

Data and activity

- 3.4.5 The limestone deposits to the north of the Park and the sandstone deposits to the south have been used as building stone for hundreds of years. The Esk Valley area and the southern border of the Park have traditionally been locations for building stone quarries where in the past there have been close to a hundred quarries. Many former quarries have now closed and extraction now takes place in only two locations, Aislaby and Lowther's Crag. Both of these quarries produce sandstone which is used for building purposes within the Park. Planning permission has also recently been granted for the re-opening of a quarry between Glaisdale and Egton. Limestone and sandstone is also imported into the Park from Lincolnshire, County Durham and further afield.
- 3.4.6 There is no data available on the output of building stone from either within the North York Moors or from the sub-region or region.
- 3.4.7 Building stone extracted in the Park or brought into the Park is transported by road (in terms of the part of its journey within the Park).

Policy Context

- 3.4.8 In addition to policy relating to all minerals, the National Planning Policy Framework requires planning authorities to 'consider how to meet any demand for small-scale extraction of building stone at, or close to, relic quarries needed for the repair of heritage assets, taking account of the need to protect designated sites; and recognise the small-scale nature and impact of building and roofing stone quarries, and the need for a flexible approach to the potentially long duration of planning permissions reflecting the intermittent or low rate of working at many sites.
- 3.4.9 The National Park Management Plan contains policies supporting the continued conservation and restoration of the built heritage and sets targets to remove 35 listed buildings from the 'at risk' register. Policies within the Management Plan support the use of local materials in restoration and new developments, supporting the requirements in the Core Strategy and Development Policies and the associated Design Guide Supplementary Planning Document for development to use materials which are compatible with surrounding buildings. The demand for locally sourced building stone can therefore be expected to continue.

3.5 ***Oil and Gas***

What is it?

- 3.5.1 Oil and gas are hydrocarbons that are found in liquid and gaseous form respectively. They occur underground in reservoirs or trapped within geological structures and are used predominantly as sources of energy. Conventional oil and gas extraction involves extraction from the ground by drilling. Gas can also be extracted from coalbeds and through methane captured from abandoned coal mines.

Where does it occur?

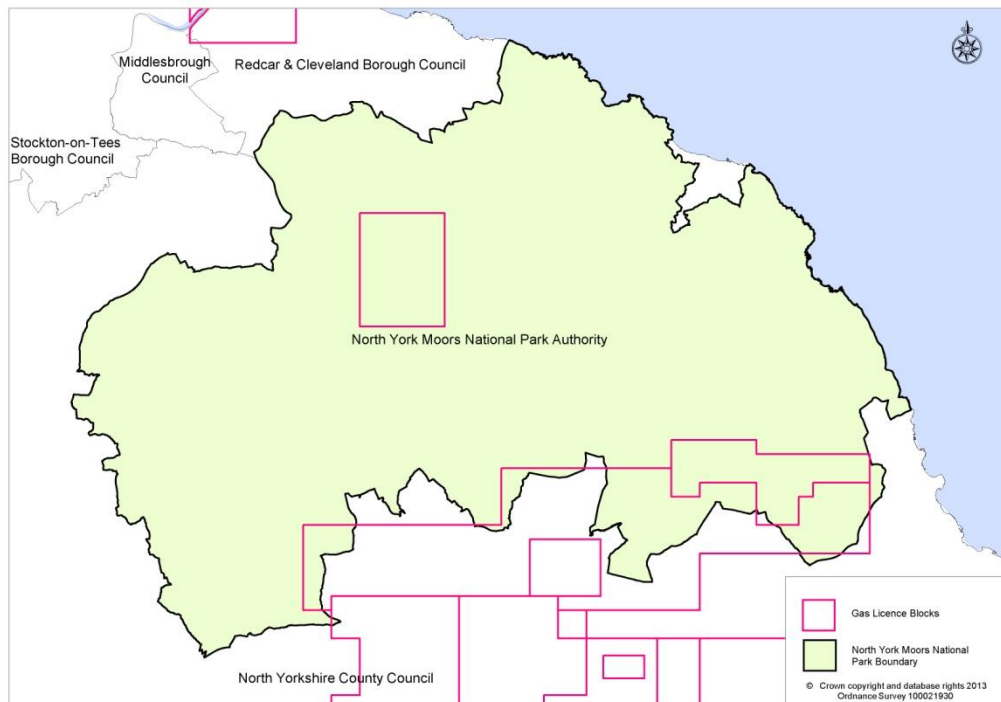
³ Strategic Stone Study – A Building Stone Atlas of North-East Yorkshire (English Heritage, 2012)

3.5.2 Known gas fields are located beneath parts of the south eastern areas of the North York Moors National Park and in northern parts of the Park centred on Westerdale.

3.5.3 The southern field is known as the Ryedale Gas Field. The gas is formed from historic swamps trapped around 1,500m below ground within either Permian limestone or Carboniferous sandstone. Most of the Ryedale gas field is within the former and is 'sour' gas i.e. it contains a small amount of hydrogen sulphide and therefore needs to be processed before it can be fed into the National Transmission Network (the country's main gas supply network). Gas contained in the Carboniferous sandstone is 'sweet' gas.

Data and activity

3.5.3 The Government, via the Secretary of State for the Environment and Climate Change, regulates oil and gas exploration and extraction and issues licenses, in blocks, in relation to these activities. These licenses are called Petroleum Exploration and Development Licenses and enable the holder to investigate and drill for oil and gas. Planning permission is also required. Licenses have been issued for areas covering much of the eastern and central parts of the National Park as shown on Map 4.



Map 4: Petroleum Exploration and Development License blocks

3.5.4 Natural gas was first discovered in North Yorkshire in the 1940's. A well site in the National Park was developed in the 1970s at Lockton and the gas was processed at a plant in Pickering, outside of the National Park. The operating lifetime of the well site was relatively short as a result of the wells producing water. Over the past few decades planning permission has been granted for temporary boreholes around Wykeham Forest, Cloughton Moor, Moorsholm, Hackness, Troutsdale, Westerdale, Egton, Grosmont and Fylingthorpe none of which have been developed further.

3.5.5 Exploration for gas took place in the Westerdale area in the 1960s and again in 2005, the former being abandoned due to water issues and the latter being found to not be

economically viable. A further exploratory borehole was granted planning permission in 2012 to the north east of Westerdale village.

- 3.5.6 Exploration and appraisal of gas reserves at a number of sites around Ebberston Moor have been taking place over recent years to serve the power plant at Knapton Generating Station (outside the National Park) which is presently served by a number of well sites also outside of the National Park. The plant at Knapton has a capacity of 9mmscf/d⁴. The electricity generated is fed into the National Grid.
- 3.5.7 Planning permission was granted in 2012 for gas extraction from a wellhead at Givendale Head, Ebberston (to the south of the Ebberston Moor site) to serve a processing plant in Thornton le Dale just outside of the National Park boundary (which also gained permission in 2012). This plant has a potential maximum capacity of 40mmscf/d. The gas will be transported through the National Transmission Network. More recently, planning permission was granted by both the County Council and the National Park Authority for a combined gas production scheme at Ebberston Moor South Well which involves piping the gas to Knapton Generating Station as an alternative to the 2012 scheme and negating the need for a new gas processing facility at Thornton le Dale.

Policy context

- 3.5.8 National planning policy for oil and gas is contained in the National Planning Policy Framework, specifically paragraphs 147 to 149. This states that Minerals Planning Authorities should clearly distinguish between the three phases of exploration, appraisal and production and address constraints on production and processing in areas that are licensed. This policy will need to be considered within the context of other policies in the NPPF, notably paragraphs 115 and 116 which relate to National Parks.

3.6 **Potash**

What is it?

- 3.6.1 Potash is the term generally used for a number of potassium-bearing minerals, although strictly speaking potash is in fact potassium chloride or muriate of potash (following processing of the mineral). Other products, containing lower grades of potassium, are sulphate of potash, potassium nitrate and polyhalite which are classified as potash salts.
- 3.6.2 Many minerals contain potassium but only those that are water soluble are of commercial interest. In the UK, sylvinite (a mixture of sylvine and salt) is the main mineral which is mined for its potassium content, although polyhalite and carnallite also exist as lower grade sources of potassium. In relation to polyhalite the term is used for both the mineral and the product as processing is not necessarily required.
- 3.6.3 Around 90% of potash produced in the UK is used in the manufacture of fertilisers, although some is also used in the manufacture of other products such as soap and television screens⁵.

Where does it occur?

- 3.6.4 Sources of potash in the UK only occur below ground, in an area focused around east Yorkshire, including the eastern part of the North York Moors National Park.

⁴ million standard cubic feet per day

⁵ Potash Minerals Planning Factsheet (British Geological Survey, 2011)

This is the western part of a much wider deposit which extends to Germany, reflecting the extent of the historic Zechstein Sea. Both sylvinite and polyhalite make up the deposit.

Data and activity

- 3.6.5 The North York Moors National Park contains the UK's only potash mine. This is located at Boulby in the north eastern part of the Park and has been producing potash (muriate of potash) since 1973. Here the primary ore mined is sylvinite which is processed to form muriate of potash, although rock salt (see section 3.7) and polyhalite (see below) are also extracted. Mining occurs at depths of 800-1350m below ground and operations currently extend to around 14km off-shore. The muriate of potash extracted from Boulby is processed on site and transported by rail to Teesside.
- 3.6.6 Output of potash from the mine has totalled 24.6m tonnes to date, with a peak in 2003 of 1.04m tonnes⁶. Table 2 below shows output of potash over recent years. Whilst the mine supplies between 60% and 70% of the UK's demand for muriate of potash, it is estimated by British Geological Survey BGS that around 200,000 tonnes of potash (about a third of output) were exported in 2009.

Year	Thousand tonnes
2005	732
2006	716
2007	712
2008	673
2009	700
2010	700
2011 (estimate)	770

Table 2: Potash output (thousand tonnes) (marketable product)

Source - Minerals Yearbook 2011 - Data to 2010 (British Geological Survey, 2011)

- 3.6.7 Boulby potash mine's current planning permissions extends until 2023. The present combination of potash resources and reserves total 70-80mt, and this has been reasonably constant over the past 12 years, although Cleveland Potash are aiming to increase production significantly over the next 2 to 3 years through proposed investment in new equipment and plant.
- 3.6.8 More recently Boulby Mine have also begun to extract polyhalite, a lower grade source of potassium as explained above, at a lower tonnage than potash and rock salt due to lower levels of demand for the product. This typically contains 14% potassium oxide, compared to 60% contained in the muriate of potash. Extraction is currently around 100kt per year.
- 3.6.9 Planning permission was granted in June 2015 for a second potash mine in the National Park at Doves Nest Farm, near Sneaton, Whitby. The scheme, submitted by York Potash Ltd is for the extraction of 13m tonnes of polyhalite per year which would be transported to Teesside Port facilities by conveyor on a tunnel beneath the National Park.

Policy context

⁶ Potash Minerals Planning Factsheet (British Geological Survey, 2011)

3.6.10 The National Planning Policy Framework does not contain policy specifically relating to potash.

3.7 **Rock Salt**

What is it?

3.7.1 Rock salt is the well-known name for halite and is primarily used for de-icing roads. It is salt mined in its solid form, as opposed to salt in brine which is the liquid form..

Where does it occur?

3.7.2 The most extensive rock salt deposit in the National Park is the Boulby Halite which occurs beneath the potash bed mined at Boulby. This is part of the Permian salt bearing strata which extends below ground from Teesside to north Lincolnshire. A less extensive salt horizon, Sneaton Halite, occurs above the Boulby Halite.

Data and activity

3.7.3 Rock salt is mined in the National Park at Boulby, as a by-product of potash extraction. The rock salt is exposed via the roads which are created to access the potash which are carved through the salt. Boulby is one of 3 mines producing rock salt in the UK.

3.7.4 In 2009 Boulby produced around 700,000 tonnes of rock salt⁷, around half of that used in the UK. The rock salt is transported by rail to Teesside from where it is either exported or transported to locations within the UK, with a small amount transported by road to local highways authorities.

3.7.5 As it is a by-product, reserves of rock salt at Boulby are dependent upon potash production. Demand for rock salt is dependent largely upon the weather, with longer periods of ice and snow increasing demand for the product and milder winters leading to a decrease in demand.

Policy context

3.7.6 The National Planning Policy Framework does not contain policy specifically relating to rock salt.

3.8 **Coal**

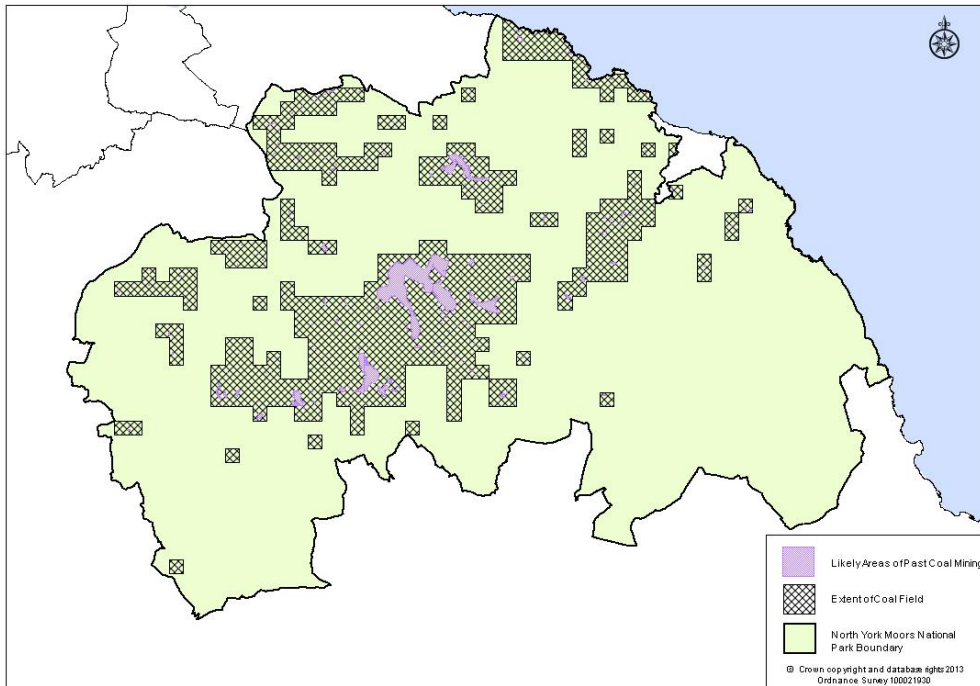
What is it?

3.8.1 Coal is formed over hundreds of years from fossilised plant remains. There are varying qualities of coal with black coals (bituminous and anthracite) being the hardest and brown coals (lignite and sub-bituminous) being of a lower quality. Coal is combustible and is therefore used primarily to produce energy.

Where does it occur?

3.8.2 Surface coal deposits occur across parts of the central and northern areas of the National Park as shown on Map 6 and at http://coal.decc.gov.uk/assets/coal/whatwedo/NorthYorkMoors_CoalResources_A1_150dpi.pdf. The coal deposits in the National Park are understood to be of a relatively poor quality.

⁷ Potash Minerals Planning Factsheet (British Geological Survey, 2011)



Map 6: Coal extraction history and extent of coal field

Data and activity

3.8.3 Coal extraction does not currently take place within the National Park, although did take place historically between the 18th and 20th centuries. The locations of former coal mine entrances and extent of probable former shallow coal mine workings are also shown on Map 6 and at <http://coal.decc.gov.uk/assets/coal/whatwedo/3037-north-york-moors-specific-coal-mining-risk-plan.pdf>. These are around the Rosedale, Farndale and Danby areas. These historic mines would have been relatively small scale when compared to the more contemporary coal mines.

Policy context

3.8.4 Specifically in relation to coal, the National Planning Policy Framework requires Minerals Planning Authorities to:

- indicate any areas where coal extraction and the disposal of colliery spoil may be acceptable;
- encourage capture and use of methane from coal mines in active and abandoned coalfield areas; and
- provide for coal producers to extract separately, and if necessary stockpile, fireclay so that it remains available for use (paragraph 147).

3.8.5 The National Planning Policy Framework also states that permission should not be given for the extraction of coal unless the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if not, it provides national,

local or community benefits which clearly outweigh the likely impacts to justify the grant of planning permission (paragraph 149).

3.9 ***Ironstone***

What is it?

- 3.9.1 Ironstone is a rock which contains a proportion of iron. Iron used to be commonly extracted from ironstone for the production of iron materials such as bridges and railways, as a component in ironstone ceramics or in some places as a building material. Nowadays it is not generally available in sufficient quantities to be economically viable. Iron was extracted through a process of smelting using kilns.

Where does it occur?

- 3.9.2 Within the Cleveland Ironstone Formation, ironstone can be found around the central, northern and northern coastal part of the Park. The Formation is a series of marine ironstone seams which exist within the Lias group (see Map 2 above). There are exposures of ironstone on the coast around Staithes⁸.

Data and activity

- 3.9.3 In the late 1800s and early 1900s ironstone mining was a significant part of economic activity in the Park. There were dozens of mines in the Park, centred mostly on Rosedale, Grosmont and the northern part of the coast, and many more around the parts of Cleveland to the north of the Park. Railways were constructed to transport the ironstone to Teesside and destinations beyond. The historic significance of ironstone mining in the area is recognised through the presence of the Cleveland Ironstone Mining museum located in Skinningrove just outside of the Park.
- 3.9.4 The final Cleveland Ironstone mine, at Eston just outside the Park, closed in 1964 and no ironstone mining takes place in the National Park today⁹. Ironstone mining is generally not undertaken on a commercial basis in the UK today.

Policy

- 3.9.5 The National Planning Policy Framework does not contain policy specifically relating to ironstone.

3.10 ***Secondary and Recycled Minerals***

What is it?

- 3.10.1 Secondary minerals are those which are produced as a by-product of other processes. Recycled (or reused) minerals are those which have been used previously. The latter is often Construction, Demolition and Excavation Waste which can either be re-used as building stone or crushed and re-used as aggregate.

Where does it occur?

- 3.10.2 Secondary minerals are reliant upon a process whereby they are the by-product. The only secondary mineral produced in the North York Moors National Park is rock salt, as a by-product of potash extraction at Boulby, which has been commented on in paragraphs 3.33 to 3.38. Secondary aggregates are produced elsewhere in North Yorkshire - Fuel Bottom Ash and Pulverised Fuel Ash are sourced from Drax and Eggborough power stations and colliery spoil is sourced from the Kellingley colliery.

⁸ <http://www.tvrigs.org.uk/industrial-geology/ironstone/cleveland-ironstone-formation>

⁹ <http://www.tvrigs.org.uk/industrial-geology/ironstone#The+History+of+Ironworking+in+The+Tees+Valley>

3.10.3 Recycled minerals are generally produced around large centres of population where there is a greater amount of construction, demolition and excavation work taking place.

Data and activity

3.10.4 As stated above, aside from rock salt there are no secondary minerals produced in the National Park. Sourced from outside of the National Park, a total of 0.99mt of secondary aggregate from Drax, Eggborough and Kellingley was used in the Yorkshire and Humber region in 2005¹⁰. Whilst all of the fuel bottom ash was used for alternative purposes, only 54% of pulverised fuel ash and 21% of colliery spoil was used, suggesting that there may be scope to increase the amount of secondary aggregates used.

3.10.5 There are a small number of firms dealing in the reuse of previously used aggregates and reclaimed building materials. The total amount of minerals which are reused or recycled through these firms is not known, although it is understood that the Yorwaste transfer station at Whitby Business Park processes construction, excavation and demolition waste amongst other wastes¹¹.

3.10.6 The latest published data on output of recycled minerals shows that in 2005 a total of 2.7mt¹² of Construction, Demolition and Excavation Waste (CDEW) was reused as aggregate in the North Yorkshire sub-region, although it is not known how much of this will have been managed within the National Park. This report also shows that of the total estimated arisings of CDEW of 10.5mt in the Yorkshire and Humber region in 2005, around 5.8mt (or 55%) was recycled with the remainder entering landfills.

Policy context

3.10.7 The National Planning Policy Framework requires minerals planning authorities to 'so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously' (paragraph 143).

3.11 *Marine dredged sand and gravel*

3.11.1 Marine dredging for sand and gravel is outwith the control of the minerals planning authorities producing the Joint Minerals and Waste Plan, but nevertheless it is entirely relevant to the Plan as the amount of sand and gravel that can be sourced from the marine area will have implications for the amount that is needed from on-shore areas. The Crown Estate owns most of the sea bed and issue licenses for the exploration for and extraction of minerals in the marine area. Permission is also required from the Marine Management Organisation.

3.11.2 Although there are sand and gravel deposits in the National Park, this has not historically been mined. Nevertheless, the National Park will be a consumer of sand and gravel to a greater or lesser degree and it is therefore necessary to consider the source of this mineral. There are extensive resources of sand and gravel off the coastline of the UK, including the coastline of the National Park. In 2009 40kt of marine dredged sand and gravel was consumed in North Yorkshire, representing

¹⁰ Survey of arisings and use of alternative to primary aggregates in England 2005, construction, demolition and excavation wastes (CLG, 2007)

¹¹ Planning application NYM/2010/0497/FL

¹² Survey of arisings and use of alternative to primary aggregates in England 2005, construction, demolition and excavation wastes (CLG, 2007). Survey of arisings and use of alternative to primary aggregates in England 2005, construction, demolition and excavation wastes

around 5% of total sand and gravel consumption in the sub-region¹³. In England as a whole marine aggregates account for 38% of total sand and gravel demand¹⁴.

- 3.11.3 Marine aggregates are not landed within the North York Moors National Park, nor within the Joint Plan area. The closest landings are at Teesside to the north of the Park and at Hull to the south.
- 3.11.4 The Humber dredging region had estimated reserves of 15.7mt of marine aggregate in 2008¹⁵. On average around 76% of permitted tonnage has been extracted over the past ten years (between 3mt and 5mt per year since 2002). It is understood that there is potential to extract a further 2.1mt per annum plus a further 8.46mt per annum based on current license applications.
- 3.11.5 Within the Yorkshire and Humber region Minerals Planning Authorities are currently investigating the potential future contribution that can be made from marine dredged sand and gravel as opposed to onshore extraction.

Policy context

- 3.11.6 The National Planning Policy Framework does not contain any policy relating to marine dredged sand and gravel as it is beyond the control of the terrestrial planning system.
- 3.11.7 Although not directly relevant to the Joint Plan, the Marine Policy Statement¹⁶ states that Marine Plans should make provision for a level of sand and gravel that ensures that marine aggregates contribute to securing an adequate and continuing supply of aggregates to the UK market, subject to a range of sustainability considerations.

3.12 **Minerals Processing**

- 3.12.1 The only form of minerals processing (other than recycling or that connected with Boulby Potash Mine) that takes place in the Park is concrete batching. There was previously an aggregate batching plant at Spaunton Quarry which has now ceased operating.

What is it?

- 3.12.2 Concrete batching is the process by which ready-mix concrete is produced, through a specially prepared mixture of various materials including sand, water and aggregates. The concrete is then transported in its liquid form to its end user.

Where does it occur?

- 3.12.3 In the National Park there is one concrete batching plant and this is at Whitby Business Park.

Data and activity

- 3.12.4 The output from the concrete batching plant at Whitby Business Park is not known, but the site is a branch of a large national concrete producing company.

Policy context

- 3.12.5 The National Planning Policy Framework requires existing, planned and potential sites for concrete batching to be safeguarded. An Area Action Plan for Whitby

¹³ North Yorkshire Sub-Region Local Aggregate Assessment (2013)

¹⁴ UK Marine Policy Statement (DEFRA, 2011)

¹⁵ North Yorkshire Sub-Region Local Aggregate Assessment (2013)

¹⁶ UK Marine Policy Statement (DEFRA, 2011)

Business Park is currently being produced jointly between the North York Moors National Park Authority and Scarborough Borough Council. This will set the framework for improvements to the infrastructure at the Business Park as well as allocating land for additional employment use. A policy to ensure the safeguarding of the concrete batching plant will be considered as part of the development of the Whitby Business Park Area Action Plan.

Appendix 1 – Current national minerals planning policy and guidance¹⁷

National Planning Policy Framework (CLG, 2012)

Technical Guidance to the National Planning Policy Framework (CLG, 2012)

Planning and Minerals: Practice Guide (CLG, 2006) (accompanied the deleted MPS1)

National and regional guidelines for aggregates provision in England: 2005-2020 (CLG, 2009) (accompanied the deleted MPS1)

Minerals Policy Statement 2: Controlling and Mitigating the Environmental Effects of Mineral Extraction in England - Annex 1: Dust (ODPM, 2005) (accompanied the deleted MPS2)

Minerals Policy Statement 2: Controlling and Mitigating the Environmental Effects of Mineral Extraction in England – Annex 2: Noise (ODPM, 2005) (accompanied the deleted MPS2)

Minerals Planning Guidance 4: Revocation, modification, discontinuance, prohibition and suspension orders (1997)

Minerals Planning Guidance 8: Planning and Compensation Act 1991 - Interim Development Order Permissions (IDOS): Statutory Provisions and Procedures (1991) (and annexes)

Minerals Planning Guidance 9: Planning and Compensation Act 1991 - Interim Development Order Permissions (IDOS): Conditions (1992)

Minerals Planning Guidance 14: Environment Act 1995 - Review of Mineral Planning Permissions (1995) (and annexes)

¹⁷ This is the current national policy and guidance at the time of publication of this Technical Paper. The Government is currently reviewing all of its planning guidance.