

# RYEDALE GAS PROJECT



## Environmental Statement Non-Technical Summary

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**BARTON  
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# Introduction

**Moorland Energy Limited** has submitted a planning application to North Yorkshire County Council (NYCC) and the North York Moors National Park Authority (NYMNP) for the Ryedale Gas Project. The planning application is supported by an Environmental Statement (ES) which assesses the impact of the proposals on the environment. Copies of the ES and all the planning application documentation can be viewed on [www.ryedalegasproject.co.uk](http://www.ryedalegasproject.co.uk) or inspected at the Council Offices. The aim of this document is to provide a summary of the ES using non-technical language.

The Ryedale Gas Project includes five principal elements:

- ❑ Gas production from the existing Ebberston Wellsite;
- ❑ The construction of two underground pipelines from the existing Ebberston Wellsite to a new Gas Processing Facility;
- ❑ A new access road between the A170 and the proposed Gas Processing Facility;
- ❑ A Gas Processing Facility at Hurrell Lane, Thornton-le-Dale; and
- ❑ An Above Ground Installation (AGI) connection into the existing National Transmission System (NTS) pipeline to the south of the Gas Processing Facility on land off New Ings Lane.

Significant reserves of gas have been discovered at the existing Ebberston Wellsite close to Dalby Forest. The aim of the planning application is to provide the necessary infrastructure to link the Wellsite to the National Transmission System (NTS). This would be achieved through the construction of two underground pipelines between the existing Wellsite and the existing NTS at Thornton-le-Dale. In order that the gas meets the requirements of the National Grid it is necessary to process the gas prior to connection and, to this end, a Gas Processing Facility is proposed at Hurrell Lane.

From the Gas Processing Facility, an underground gas pipeline links to the NTS via the AGI through a "hot tap" connection.

The ES has considered the likely significant environmental effects of the Proposed Development. Effects have been assessed using a variety of techniques including:

- ❑ ecological site surveys;
- ❑ landscape and visual appraisal including the preparation of photomontages from local viewpoints;
- ❑ air quality assessments and atmospheric dispersion modelling;
- ❑ predictions of noise levels, particularly from the Gas Processing Facility;
- ❑ traffic impact assessment;
- ❑ flood risk and drainage assessments;
- ❑ desk based and site walkover archaeological research;
- ❑ lighting assessment;
- ❑ agricultural land and soils;
- ❑ geological and hydrological surveys; and a
- ❑ socio-economic assessment.

The ES identifies the significant environmental effects arising from the proposals on the environment. Clearly, the construction and operation of the Proposed Development has the potential to cause adverse effects on the environment. The construction of the 8.6 km pipelines would affect a significant area of the countryside. However, construction impacts will be short-term and, following remediation of the land, the route of the pipeline will be difficult to ascertain in the landscape. The operation of the pipeline does not give rise to any impacts on the area. The construction and operation of the Gas Processing Facility will have a longer term environmental effect, albeit, the effects are confined to a small part of the overall project.

# Project Description

The planning application site for the project falls within the jurisdiction of two separate Councils; these are North Yorkshire County Council and the North York Moors National Park Authority.

The Proposed Development will affect land which is predominantly rural with a patchwork of agricultural fields, farms and outbuildings dominating the landscape. There are also a number of small, rural towns and villages in the vicinity including Ebberston, Allerston, Wilton, Thornton-le-Dale and Pickering.

**Plan 1** shows the site of the Proposed Development. It is made up of five separate parts, as follows :-

## **1. Gas production from the existing Ebberston Wellsite**

Equipment will be installed at the existing Wellsite to separate produced gas from any liquids that may be associated with it so that the two streams can flow independently to the proposed Gas Processing Facility.

It is estimated that there will be around 35 weekly vehicle movements to and from the Wellsite while construction takes place, with just 6 of these being heavy goods vehicles (HGV's) – less than one lorry per day.

Three permanent car parking spaces will also be needed at the well site.

## **2. Installation of Two Underground Gas Pipelines**

These will run for approximately 8.6km from the Ebberston Wellsite to the proposed Gas Processing Facility at Hurrell Lane.

There will be two pipes – one 300mm in diameter

and the other 100mm – carrying gas and any fluid produced separately, plus a fibre optic control cable. The pipes will be buried underground for the entire length of the route to a minimum depth of 1.2m, and deeper in some places to accommodate local farming practices. The pipeline runs mainly under fields and agricultural land, and where it passes under public roads directional drilling will be used, so there will be minimal traffic disruption during construction.

Once the pipelines have been laid, the land will be restored to its former condition.

## **3. Construction of a Gas Processing Facility**

Once the gas has been piped from the Ebberston Wellsite, it has to be treated so it meets domestic supply standards. This will be done at a new small, modern, clean Gas Processing Facility on land adjacent to Hurrell Lane, near Thornton-le-Dale, at the bottom of the valley. The proposed area for development of the Facility will cover 2.2 hectares and is shielded by an existing disused railway embankment, landscaping and trees, so it will not be visible from the village of Thornton-le-Dale.

The proposed Facility will comprise a series of buildings and gas processing equipment as shown on **Plan 2**.

During its construction, less than a quarter of the estimated 119 weekly vehicle movements are likely to be HGV's, and working hours during the building phase would be agreed with the local Councils. A total of 60 car parking spaces will be needed for construction, but only around 15 during operation.

## **4. New Access Road from the A170**

To allow access to the proposed Gas Processing Facility, a new access road will be constructed from the A170. This will provide a direct entry point to

the site, minimising the use of Hurrell Lane.

The new access road will meet the A170 at an existing lay-by, where there is already a field access point approximately 750m east of the existing junction with Hurrell Lane. The new junction will be designed in line with the relevant highway standards, formalising the existing farm access arrangements.

From the A170, the access road will run southwards parallel to the field boundary. The proposed road bends to the east at the bottom of the field to avoid the trees situated along the path of the dismantled railway embankment. After crossing under the disused railway, it turns west to meet the perimeter access road of the proposed Facility.

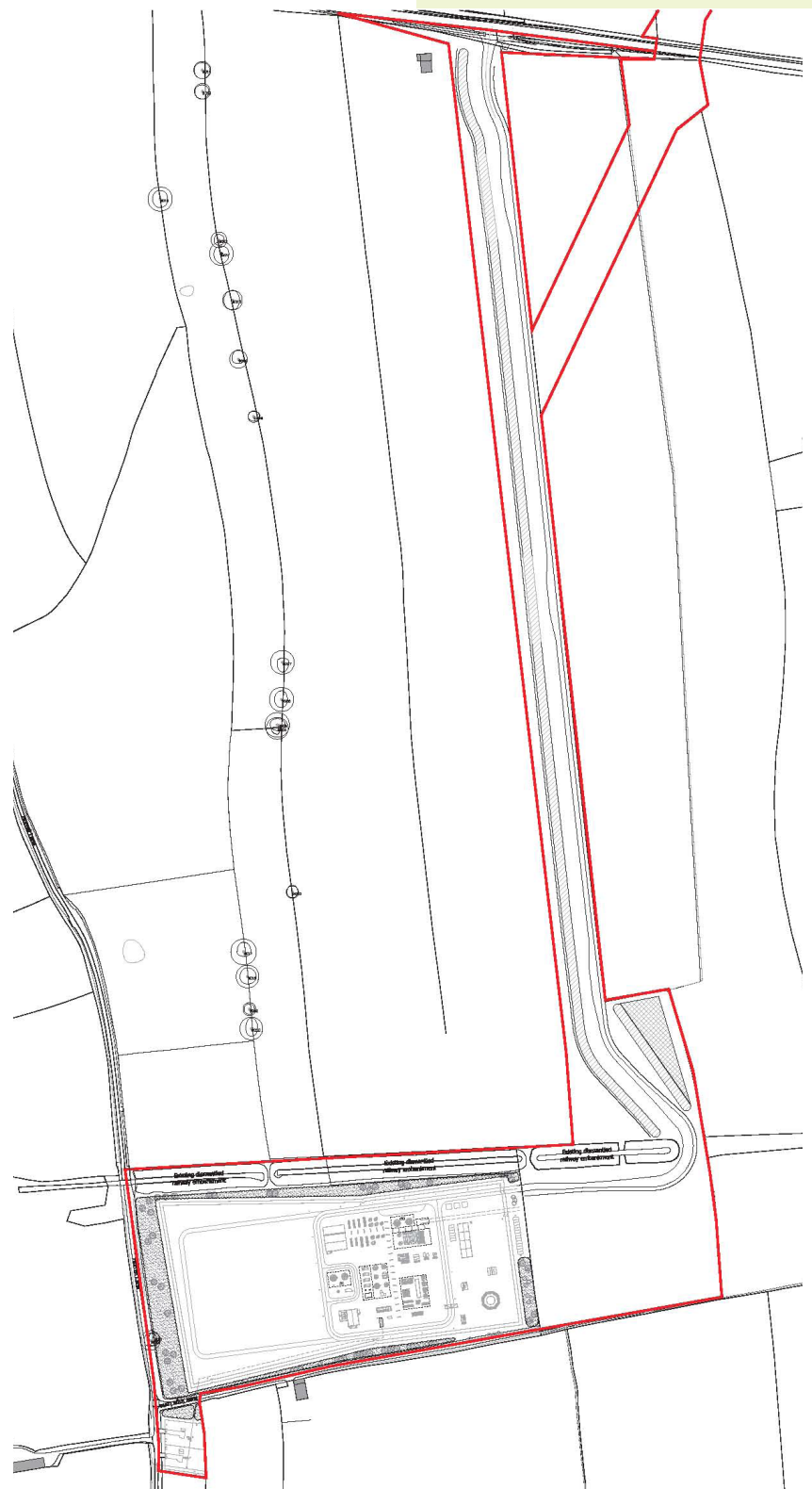
New signs on the A170 will warn drivers of the potential for traffic turning into and out of the access. A security gate will be installed at the entrance to the access road, which will be set back to clear vehicles turning in from the main highway. A post and wire fence and hedgerow will run the entire length of the western side of the access road.

## 5. Underground Pipeline from the Processing Facility to the National Transmission System

One 300mm diameter pipeline will be installed to transport gas from the proposed Gas Processing Facility a short distance to a new connection to the existing National Transmission System pipeline, which runs through fields to the south of the proposed Facility.

To allow maintenance access to the proposed new connection, a new access track will be constructed from Hurrell Lane.

## Plan 2



## Landscape

The location of the proposed Gas Processing Facility has been carefully chosen to reduce its visual impact while remaining relatively close to the Wellsite and access to the National Transmission System pipeline, which runs through the area. The Facility will be situated directly south of a 5m high disused railway embankment which is also planted with mature trees and bushes, providing an existing natural visual barrier. New areas of planting around the site are also proposed to assist in screening the development from nearby properties.



## Need

Demand for gas in the UK is predicted to continue to rise, mainly driven by the increasing needs of the utility companies because of greater demand from business and consumers. Currently, more than two thirds of the energy used to heat our homes comes from gas distributed through the National Grid.

We may have been assured secure gas supplies over the last 30 years from indigenous off-shore reserves such as the North Sea, but these, like oil, are being depleted. Ofgem's (the Energy Regulator) recently published Project Discovery Report states that whilst gas supplies are thought to be secure for the next three years, it has concerns from 2015 onwards. The Report calls for action to deliver secure supplies and meet environmental objectives at affordable prices beyond the middle of this decade. It warns unprecedented levels of investment, in projects such as the Ryedale Gas Project, will need to be sustained over many years in difficult financial conditions, and against a background of risk and uncertainty.

Britain currently sources just half of its gas supplies from the North Sea and is becoming increasingly reliant on overseas supplies from places such as the Middle East, and piping it from countries such as Russia. As well as the UK investing in renewable energy sources, it is now more important than ever to extract reserves from new sites such as Ebberston to ensure that a range of new energy supplies are brought online as soon as possible.

The UK also needs a diverse mix of gas storage and supply infrastructure to respond effectively to daily and seasonal changes in energy demand, and to guarantee enduring capacity during cold winters such as that experienced recently.



Existing  
Ebberston Wellsite

New Gas Processing  
Facility at Hurrell Lane

# Environmental Impacts

The ES sets out the potential effects of the Proposed Development and the actions necessary to minimise the effect on the environment. The significant environmental effects and the measures to reduce their adverse effects are as follows:

## Transport and Traffic

The main period for traffic movements is during construction of the Proposed Development. Delivery of pipes and equipment would generate traffic movements on local roads in the vicinity of the site. However, these impacts would be temporary and short-term. During operation, traffic movements would be limited. There would be occasional deliveries and removals of materials but these are expected to have a negligible effect on the surrounding network which is considered capable of accepting such movements.

## Ecology

Construction of the proposed development has the potential to adversely affect fauna and flora on the site and without proper controls could risk wider impacts on adjoining land. Additional habitat creation and enhancement on site would offset any habitat loss that may occur as a result of the proposals.

Habitat losses are restricted to areas of low nature conservation value, including arable land, improved grassland and species-poor hedgerows. With the exception of losses of arable land to the proposed Hurrell Lane Gas Processing Facility, these losses would be temporary and the habitats would be reinstated on completion of the pipeline installation. No designated statutory or non-statutory sites of nature conservation value would be significantly affected by the Proposed Development.

Other potential minor, temporary and indirect effects would be avoided and minimised through control of construction methods and design. The site would be monitored to detect protected and/or notable species (particularly badger and nesting birds) in close proximity to working areas. New planting

would offset minor losses to hedgerow habitats and would enhance the ecological value of the site for breeding birds and local bat populations.

## Landscape

The landscape character of the northern part of the Site, including the existing Ebberston Wellsite, is within the North Yorkshire Moors and Cleveland Hills Countryside Character Area and the Dalby Forest Landscape Character Area. The southern part of the Site, including the proposed Hurrell Lane Gas Processing Facility and the associated access road, is within the Vale of Pickering Countryside Character Area.

The proposals do not change the character of the existing Ebberston Wellsite as its role does not change. The permanent effects from the proposed pipeline within the Dalby Forest Landscape Character Area are limited to loss of field boundary hedgerows and any associated trees along the alignment of the proposed pipeline, where vegetation removed cannot be reinstated.

The proposed Hurrell Lane Gas Processing Facility and access road will introduce utilitarian components into an otherwise agricultural landscape of the Vale of Pickering with the subsequent detrimental effect on landscape character.

Landscaping is proposed to replace the loss of hedgerow resulting from the construction of the pipeline. New landscaping is proposed to the Ebberston Wellsite, the Hurrell Lane Gas Processing Facility and the AGI to assist the assimilation of the development into the countryside and to assist the screening of the built development.

## Visual

The Ebberston Wellsite and the construction of the pipeline would have a limited visual effect as development is within the existing site or is short term and temporary in nature. The Hurrell Lane Gas Processing Facility would have a visual effect although it has been sited to make use of the

screening from the north provided by the disused railway embankment. A comprehensive landscaping scheme is also proposed to assist in screening the built development.

The visibility study demonstrates that the proposed pipeline, the existing Ebberston Wellsite and the Hurrell Lane Gas Processing Facility, are generally well screened. Limited views are obtained from publicly accessible locations such as public rights of way from open locations to the north west on the elevated forest plateau, or from more distant locations to the south on the valley floor of the Vale of Pickering. Very few residential properties experience permanent adverse visual effects; these are generally limited to isolated residential components of farms, located in close proximity to the permanent development of the proposed Gas Processing Facility.

However, on maturity of the planting across the proposed pipeline route and around the proposed Gas Processing Facility, the existing landscape character would be reinstated so that there was no significant change in view. Alternatively, the landscape buffers would provide an effective screen in views towards the permanent development, during both the summer and in winter months, and would remove significant adverse visual effects.

## Lighting

During the construction, operation and decommissioning phases, the principal lighting effects are likely to be associated with the need for temporary lighting associated with the temporary illumination of the site area and work areas. In order to mitigate such temporary impacts on surrounding sensitive receptors the lighting requirements at the Site during the construction, operation and decommissioning phase will be managed. Installed lighting will involve the use of well located, modern light fittings which are directionally controlled and will be in accordance with current best practice standards and County Planning Authority requirements. Light nuisance

(spill) will not extend a significant distance from the site boundary due to the screening afforded by the soil bunds, equipment, compound area and coniferous trees.

## Noise and Vibration

The Gas Processing Facility would produce noise during daytime and night-time periods. "Noisy plant" items would be located within buildings or fitted with noise attenuation equipment to reduce noise breakout. The noise attenuation measures are proposed to ensure that there would be no more than minor adverse effects on local noise sensitive properties, with particular regard to the dwellings closest to the site.

## Water Resources

The Proposed Development would be at low risk of flooding from fluvial and other sources. As a result of the Proposed Development, the rate of surface water runoff from the built development would increase, potentially increasing the risk of flooding to other areas downstream. The Proposed Development is, however, surrounded by agricultural fields and increases in flood risk are likely to be insignificant. There is need however, to mitigate flood risk from the increased surface water runoff, to ensure it does not lead to increases in flood risk to other areas.

A separate process area drainage system is proposed. Both the surface water and process water drainage systems would have separate interceptor pits to catch condensate and to allow appropriate testing before discharge.

## Cultural Heritage

The route of the pipeline crosses Scheduled Ancient Monuments (SAM's) and areas of archaeological importance. At the Scheduled Ancient Monuments, the pipeline would be constructed below the surface to avoid any disturbance to these features. In the areas of archaeological importance, a 'watching brief' would allow for any remains of importance to be identified during construction.



## Soils and Agriculture

The construction of the pipelines would result in a temporary disturbance of agricultural land as once it was complete the land would be returned to agricultural use. The Gas Processing Facility would result in a permanent loss of agricultural land but this permanent loss is only a very small area comprising 2.2 hectares (ha).

## Air Quality

The main effects on air quality arise from emissions from construction plant and traffic associated with construction activities, dust generation during construction works, and emissions from the Hurrell Lane Gas Processing Facility once operational. Dust and air emissions from construction activities would be mitigated through the use of best practice techniques. Atmospheric emissions from the Hurrell Lane Gas Processing Facility would meet European and national standards.

## Socio-Economic Effects

As set out above, the Proposed Development would have a positive effect in terms of contributing to national energy needs, therefore, helping to reduce the UK's dependency on energy imports. Exploitation of the UK's domestic fossil fuel reserve forms a crucial part of the Government's energy strategy and fundamentally the Proposed

Development will provide both national and regional benefits.

The Proposed Development would have a positive socio-economic effect in terms of creation of direct and indirect, short and long term employment opportunities and diversification of the local economy is a major priority when considering proposals for future development. Therefore, in the context of declining manufacturing and agricultural sectors, the Proposed Development would help to boost the local economy by providing new job opportunities in other sectors such as construction and energy.

For both Ryedale District Council and the North York Moors National Park the tourism industry is crucial to the prosperity of the local economies. However, this sector is vulnerable to the fact that the industry can be greatly affected by often unpredictable factors such as the weather, overseas travel and economic instability. The Proposed Development would have a positive effect on the local economy as is it likely to result in an increase in revenues for local businesses outside of peak seasons, as well as employment opportunities, skills training and the use of local resources.

A summary of the potential effects, their extent and their significance is contained in **Table 1**.

# Conclusion

In the UK, there is a clear and demonstrable need for developing onshore gas reserves, to assist in securing security of supply and balancing gas consumption and resources at all times, including seasonal, daily and hourly fluctuations. The Ryedale Gas Project will make a contribution to the UK gas supply by allowing the production of gas from the Ebberston Wellsite and its transmission to the NTS. Whilst the ES has identified some potential adverse environmental effects these, in the case of the construction of the pipelines, are short-term and, in the case of the Hurrell Lane Gas Processing Facility, can be mitigated. Having regard to the assessment contained in this ES and summarised in Table 1, it is considered that, subject to the implementation of the mitigation measures, the proposed Ryedale Gas Project would not have any significant adverse effect on the environment such that the planning application should be refused.

**Table 1 - Significance Table**

POTENTIAL EFFECT	STAGE OF DEVELOPMENT CONSTRUCTION	DURATION OF EFFECT	EFFECTS	GEOGRAPHICAL IMPORTANCE				POTENTIAL SIGNIFICANCE OF RESIDUAL EFFECT
				N	R	D	L	
Transport	Construction	Temporary	Increase in HGV Movements on the Local Highway Network.			*	*	Minor Adverse
	Operation	Permanent	Operational traffic levels are restricted to maintenance and staff vehicles, the level of which is not significant.				*	Not significant
Ecology & Biodiversity	Construction	Temporary	Disturbance to species of ecological importance, including Badgers.				*	Adverse
	Operation	Permanent	The Pipelines would have no effect on ecology and biodiversity. The Gas Processing Facility would generate noise and disturbance that would have an impact on ecology.				*	Not significant
Landscape & Visual Amenity	Construction	Temporary	Visual Effects during construction would be temporary.				*	Minor Adverse
	Completed development	Permanent	The pipelines would have no visual or landscape effect as the land would be re-instated for agricultural use. The Gas Processing Facility would have an effect on the surrounding landscape and in views from nearby residential properties and footpaths. A comprehensive landscape scheme is proposed to assist in the mitigation of this effect.				*	Moderate adverse
Lighting	Construction	Temporary	Effect of light spill, glare & sky glow on residential properties has the potential to affect amenity. Effects would be temporary and mitigation measures are proposed to limit light spill.				*	Negligible
	Completed Development	Permanent	Effect of light spill, glare and sky glow on residential properties and road users. Mitigation measures include the use of down-lighters and shields. Floodlighting of buildings or the site is not required.				*	Negligible
Noise and Vibration	Construction	Temporary	Noise and vibration effects on residential properties.				*	Negligible
	Completed Development	Permanent	Noise would be generated from the Gas Processing Facility. Mitigation includes ensuring that noisy plant is located within buildings or is protected by sound attenuation equipment.				*	Minor
Water Resources	Construction	Temporary	Run-off and potential contamination from construction activities.				*	Negligible
	Completed Development	Permanent	No increase in flood risk and permanent plant and buildings would be subject to the provision of appropriate drainage infrastructure.				*	Negligible
Cultural Heritage	Construction	Temporary	The proposed route of the pipeline crosses Scheduled Ancient Monuments. These will be avoided as the pipelines will be constructed underground so that there is no effect. Disturbance to listed buildings from light spill will be mitigated as summarised above.				*	Negligible
Archaeology	Completed development	Permanent	Disturbance to listed buildings from light spill will be mitigated as summarised above.					
	Construction	Temporary	Disturbance to potential archaeological remains mitigated by site investigation and 'watching brief'.				*	Negligible
Soils & Agriculture	Construction	Temporary	Temporary loss of agricultural land and soils during construction of the pipeline. Loss of agricultural land from the construction of the Gas Processing Facility.				*	Negligible
	Completed Development	Permanent	The route of the pipeline would be reinstated for agricultural use. The site of the Gas Processing Facility would, however, be lost for agricultural use.				*	Negligible
Air Quality	Construction	Temporary	Generation of dust would be mitigated by standard industry practice.				*	Minor Adverse
	Construction	Permanent	Exhaust emissions of Nitrous Dioxide (NO <sub>2</sub> ) & Carbon Monoxide (CO)				*	Minor Adverse
	Completed Development	Permanent	Emissions from the site would meet European and UK standards				*	Negligible
Socio-Economic	Construction	Temporary	Generate jobs and 'multiplier' effects brought about by increased expenditure and potential nuisance on adjoining properties.				*	Minor Beneficial
	Completed Development	Permanent	Effect on gas storage supply in the UK	*	*	*	*	Major Beneficial

**Notes:**

- i) Extent is defined as falling within the following categories: (N) National; (R) Regional; (D) District; (L) Local - no international effects have been identified.
- ii) Where a possible effect has been identified but on consideration any effects are regarded to be minimal, or a potential effect is regulated by statutory environmental controls to which the scheme will be compliant we have indicated this to be

\*Not significant\*.

