

Ebberston Moor South Wellsite - Knapton Gas Pipeline
Ebberston, North Yorkshire

Volume 1 Environmental Statement Main Text and Figures



August 2014

Ebberston Moor South (EMS) to Knapton Generating Station (KGS)
Gas Pipeline

Environmental Statement
Main Text and Figures

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ABBREVIATIONS

AADT	Annual Average Daily Traffic
AAWT	Average Annual Weekday Traffic
ADE	Average Daily Exposure
AGI	Above Ground Installation
ALC	Agricultural Land Classifications
AM	Before Midday
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AQS	Air Quality Strategy
ASPT	Average Score Per Taxon
ATC	Automatic Traffic Count
BAP	Biodiversity Action Plan
BAT	Best Available Technique
BH	Borehole
BGS	British Geological Survey
BPM	Best Practice Means
BOD	Biochemical Oxygen Demand
BRE	Building Research Establishment
BS	British Standard
CAMS	Catchment Abstraction Management Strategy
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
CIHT	Chartered Institute of Highways and Transportation
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Lane Exposure Assessment
CLR	Contaminated Land Research Reports
CO	Carbon Monoxide
COMEAP	Committee on the Medical Effects of Air Pollutants
CRTN	Calculation of Road Traffic Noise
dB	Decibel
dB(A)	Decibels, A-weighted
DCLG	Department for Communities and Local Government
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DO	Dissolved Oxygen
DoE	Department of the Environment
DrWPA	Drinking Water Protection Area
DTI	Department for Trade and Industry
EA	Environment Agency
EALs	Environmental Assessment Levels
EcIA	Ecological Impact Assessment
EDS	Early Development Scheme
EIA	Environmental Impact Assessment
EPA	Environmental Protection Act
EPUK	Environmental Protection UK
EQI	Environmental Quality Index
EQS	Environmental Quality Standards
ES	Environmental Statement
FCD	Field Capacity Day
FDP	Field Development Plan

FEED	Front-end engineering design
FID	Flame ionisation detector
FRA	Flood Risk Assessment
GAC	Generic Assessment Criteria
GEA	Gross External Area
GFA	Gross Floor Area
GTA	Guidance on Transport Assessment
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GP	General Practitioner
GQA	General Quality Assessment
H3	Horizontal Guidance Note IPPC H3
HA	Highways Authority
Ha	Hectares
HAP	Habitat Action Plan
HCV	Health Criteria Value
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HMSO	Her Majesty's Stationery Office
Hz	Hertz
IAQM	Institute of Air Quality Management
ID	Induced draft
IEA	Institute for Environmental Assessment
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Assessment and Management
IfA	Institute for Archaeologists
IOA	Institute of Acoustics
IPG	Interim Planning Guidance
ISO	International Standards Organisation
JNCC	Joint Nature Conservation Committee
KAF	Kirkham Abbey Formation
KGS	Knapton Generating Station
Km	Kilometre
LA90	Noise level exceeded 90% of the time
LAeq	Continuous sound pressure level over a given period
LAm _{ax}	The maximum noise level measured
LAQM	Local Air Quality Management
LAQM.TG	Local Air Quality Management Technical Guidance
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Area
LCT	Landscape Character Type
LDF	Local Development Framework
LEL	Lower explosive limit
LPA	Local Planning Authority
LPS	Local Plan Strategy
LOD	Limit of Detection
LTN	Local Transport Note, prepared by the DfT
LTP	Local Transport Plan
LTZ	Local Transmission Zone
m ³	Cubic metres
m	Metres
MAFF	Ministry of Agriculture, Fisheries and Food
MAGIC	Multi-Agency Geographic Information for the Countryside
mbgl	Metres below ground level
MCERTS	Monitoring Certification Scheme
MDI	Mean Daily Intake
mm	millimetre
mms ⁻¹	Millimetres per second
Mmm ³ /d	Million standard cubic feet per day

MPG	Minerals Planning Guidance Notes
mph	Miles per hour
MWDF	Minerals and Waste Development Framework
NAQIA	National Air Quality Information Archive
NCA	National Character Area
NEC	Noise Exposure Category
NEYEDC	North and East Yorkshire Ecological Data Centre
NGN	Northern Gas Networks Limited
NGR	National Grid Reference
NMR	National Monuments Records
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxide
NOMIS	Official Labour Market Statistics
NPPF	National Planning Policy Framework
NTM	National Transport Model
NTS	National Transmission System
NTS	Non Technical Summary
NYMNP	North York Moors National Park Authority
NYCC	North Yorkshire County Council
ODPM	Office of the Deputy Prime Minister
ONS	Office for National Statistics
OS	Ordnance Survey
PAN	Planning Advice Note
PPC	Pollution Prevention and Control
PPV	Peak particle velocity
PM	After Midday
PM ₁₀	Fine particulate matter
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPS	Planning Policy Statement
PROW	Public Right of Way
PSV	Pressure Safety Valves
RBCA	Risk-based contamination assessment
RDC	Ryedale District Council
RFC	Ratio of Flow to Capacity, an indicator of the performance of a junction
RMS	Remediation Method Statement
RQO	River Quality Objective
RS	Regional Strategy
RSS	Regional Spatial Strategy
RTRA	Road Traffic Regulations Act
QRA	Qualitative Risk Assessment
SAC	Special Area of Conservation
SCADA	System Control and Data Acquisition
SFRA	Strategic Flood Risk Assessment
SGV	Soil Guideline Value
SINC	Site of Importance for Nature Conservation
SM	Scheduled Monument
SMS	Strip, Map and Sample
SoP	Standard of Protection
SoS	Secretary of State
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
sqm	Square metres
SSSI	Site of Specific Scientific Interest
SuDS	Sustainable Drainage System

SWMP	Site Waste Management Plan
TA	Transport Assessment
TP	Trial pit
TP	Travel Plan
TPO	Tree Preservation Orders
UKAS	United Kingdom Accreditation Service
µg/m ³	micrograms per cubic metre
USA	Updating and Screening Assessment (air quality)
VDV	Vibration Dose Value
vehs	vehicles
WCS	Water Cycle Study
WHO	World Health Organisation
WQS	Water Quality Standards
WTN	Waste Transfer Note
ZTV	Zone of Theoretical Visibility

GLOSSARY

Within this Environmental Statement the following terms are defined as follows:

24 hour mean concentration	The average (mean) of the hourly pollutant concentrations measured or predicted for 24 consecutive hours in one day.
Above Ordnance Datum	Ordnance Datum is the vertical datum used by ordnance survey as the basis for deriving altitudes on maps. Topography may be described using the level in comparison or 'above' ordnance datum.
Adsorbition Units	A process plant to remove water and heavy hydrocarbons from the gas to match the specification required by the National Grid.
Advanced air quality dispersion model	A 'new generation' of advanced dispersion models have been developed which measure surface heat flux, which in turn influences the turbulent structure of the atmosphere and hence the dispersion of a plume.
Agriculture	Section 336(1) of the Town and Country Planning Act 1990 defines agriculture as including: <ul style="list-style-type: none"> • Horticulture, fruit growing, seed growing, dairy farming; • The breeding and keeping of livestock (including any creature kept for the production of food, wool, skins or fur, or for the purpose of its use in the farming of land); • The use of land as grazing land, meadow land, osier land, market gardens and nursery grounds; and • The use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes.
Agricultural Land Classification (ALC)	The ALC provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. It helps underpin the principles of sustainable development.
Air Pollutants	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation and/or materials.
Air Quality Action Plan (AQAP)	An Air Quality Action Plan (AQAP) is a plan with the aim of achieving the objective values within an AQMA.
Air Quality Management Area (AQMA)	A defined area by virtue of Section 82(3) of the Environment Act 1995, where it appears that the air quality objectives prescribed under the UK Air Quality Strategy will not be achieved. In these areas, a Local Authority must designate Air Quality Management Areas, within which an Action Plan can be proposed to secure improvements in air quality so that prescribed air quality objectives can be achieved.
Air Quality Objectives (AQO)	Criteria for the assessment of local air quality expressed in terms of a concentration threshold to be achieved by a certain date. The thresholds are established at concentrations considered acceptable in the light of what is known about the effects of each pollutant on health or ecosystems. Air Quality Objectives are referred to in the Air Quality Strategy for the purposes of air quality management.
Air quality sensitive receptors	People, property or designated sites for nature conservation that may be at risk from exposure to air pollutants that could potentially arise as a result of the Proposed Development.
Alluvium	Deposits laid down by water. Marine alluvium is deposited by the

	sea, and fresh water alluvium is laid down by rivers and in lakes.
Ambient	Background levels.
Amenity	The preferable features of a location which contribute to its overall character and the enjoyment of residents or visitors.
Amine	Amines are organic compounds and functional groups that contain a basic nitrogen atom with a lone pair. Amines are derivatives of ammonia, wherein one or more hydrogen atoms have been replaced by a substituent such as an alkyl or aryl group.
Amine Contactor	An amine contactor is a trayed vessel or tower that flows an amine solution counter currently with a vapour or gas that needs to be treated. Typically the treatment is to remove H ₂ S or CO ₂ from a natural gas stream.
Amplitude (sound)	The second important characteristic of sound is amplitude or level. Two units are used to express level, a) Sound Power Level – L _w and b) Sound Pressure Level – L _p . Sound power level is an inherent property of a source whilst sound pressure level is dependent on surroundings/distance/directivity, etc. The sound level measured on a meter is the sound pressure level, L _p .
Anglo Saxon	Pertaining to the period when Britain was occupied by peoples from northern Germany, Denmark and adjacent areas. The period dates from approximately AD 450-1066.
Annual average daily total flows	A daily traffic flow (24 hours), expressed as a mean daily flow across all 365 days of the year (AADT) in units of vehicles per hour.
Annual mean concentration	The average (mean) of the hourly pollutant concentrations measured or predicted for a one year period.
Applicants	Third Energy UK Gas Limited and Moorland Energy Limited
Aquifer	The strata that contains groundwater as defined below
Area of High Landscape Value	An Area of High Landscape Value is a non-statutory and locally designated area outside the national landscape designations, which is considered by the local planning authority to be of particular landscape value to the local area.
Archaeological Desk Based Assessment	An assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate.
Archaeological evaluation	A limited programme of non-intrusive (such as geophysical survey) or intrusive (such as trial trenching) fieldwork that determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. The fieldwork is undertaken in order to define the character, extent, quality and significance of any remains or deposits present.
Archaeological excavation	A programme of controlled, intrusive fieldwork undertaken within defined research objectives to investigate and record archaeological features, structures and deposits and recover artefacts, ecofacts and other remains within a specified area. Involves the systematic removal of deposits, with the records made and objects recovered being further studied and the results

	published.
Archaeological interest	Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them. These heritage assets are part of a record of the past that begins with traces of early humans and continues to be created and destroyed.
Archaeological watching brief	A programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site where there is a possibility that archaeological deposits may be disturbed or destroyed.
Site	Ebberston Moor South (EMS) Well Site, pipeline corridor between the EMS Well Site and Knapton Generating Station (KGS) and KGS.
A-weighting dB(A)	The sound pressure level determined when using the frequency-weighting network A. The A-weighting network modifies the electrical response of a sound level meter so that the sensitivity of the meter varies with frequency in approximately the same way that the sensitivity of the human hearing system varies with frequency. The human ear has a non-linear frequency response; it is less sensitive at low and high frequencies and most sensitive in the range of 1 to 4 kHz. The A-weighting is applied to measured or calculated sound pressure levels so that these levels correspond more closely to the response of the human ear. A-weighted sound levels are often denoted as dB(A).
Baseline	Environmental conditions at specific periods of time, present on, or near a site, against which future changes may be measured or predicted.
Biodiversity	Abbreviated form of 'biological diversity' referring to variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.
Biodiversity Action Plan	Plans which set specific, measurable, achievable, realistic and time bounded conservation targets for species and habitats. The UK BAP is the UK Government's response to the Convention on Biological Diversity (CBD) signed in 1992. It describes the UK's biological resources and commits a detailed plan for the protection of these resources. It has 391 Species Action Plans, 45 Habitat Action Plans and 162 Local BAPs with targeted actions. www.ukbap.org.uk
Borehole	The wellbore itself, including the open hole or uncased portion of the well. Borehole may refer to the inside diameter of the wellbore wall, the rock face that bounds the drilled hole.
British Standards	The display of a British Standard number shows that the manufacturer claims to have made the produce in accordance with British Standard. A standard is a published document that contains a technical specification or other precise criteria designed to be used consistently as a rule or definition. Standards are designed for voluntary use and do not impose any regulations. However, laws and regulations may refer to certain standards and make compliance with them compulsory. Sometimes BS will be accompanied by the letters EN and/or ISO. These mean that the standard was developed as a European (EN) or International (ISO) standard and then adopted by the UK as a British Standard.

Bronze Age	The period between about 2500 BC and 700 BC characterised by the use of bronze.
Completed Development	Within the ES this phase refers to the Proposed Development when fully built and operational.
Condition	An obligation attached to a planning permission which circumscribes the manner in which a development may be carried out.
Conservation Area	An area of special environmental or historical importance that is protected from changes by law.
Considerate Contractors	Contractors who are compliant with the Considerate Contractors scheme can be considered as a contractor who is clean, respectful, safe, environmentally conscious, responsible and accountable.
Construction	Within the ES this phrase refers to all construction works associated with the Proposed Development. Construction is anticipated to commence in 2014 and be completed by 2017.
Construction Liaison Officer	A designated liaison officer who will deal with public and other complaints and enquiries during the construction phase.
Consultation	Procedures for assessing public opinion about a plan or major development proposal, or in the case of a planning application, the means of obtaining the views of affected neighbours or others with an interest in the proposal.
Contamination	Contamination is the addition, or the result of addition, or presence of a material or materials to, or in, another substance to such a degree as to render it unfit for its intended purposes.
Conventional hydrocarbons	Oil and gas where the reservoir is sandstone or limestone.
Critical load	Critical loads are a tool for assessing the risk of air pollution impacts to ecosystems.
Cropmarks	Differential growth in crops indicating the presence of subsurface remains of archaeological interest (and variations in underlying geology).
Cultural Heritage	The legacy of physical artefacts and intangible attributes of a group or society inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes both physical culture (such as buildings, monuments, landscapes, books, works of art and artefacts) as well as intangible culture (such as folklore, traditions, language and knowledge).
Cumulative effects	The summation of effects that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.
Curtilage	The land, often enclosed, around a building
Designated Heritage Asset	A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated as such under the relevant legislation.
Development	Development is defined under the Town and Country Planning Act 1990 as " <i>the carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any building or other land.</i> "
Development Control	The term commonly employed to describe that part of the Town

	and Country Planning Act (as amended) which relates to the submission and determination of planning applications.
Development Plan	A set of documents (text and maps) which contain the regional planning body and local planning authority policies and proposals for development, including minerals (Regional Spatial Strategies and Development Plan Documents). Unitary development plans, structure plans and local plans are now superseded.
Development Plan Documents (DPD)	Development plan documents, together with the Regional Spatial Strategy, form the development plan. The DPD include the core strategy, allocations, proposals map and action area plans.
Directional Drilling	Non vertical wells that begin with slanted but straight holes often used for mineral exploration and to avoid surface obstacles. Wells may also begin vertically but progressively build angle to intercept the hydrocarbon reservoir in a longer section that can be achieved by vertical drilling. Such non-vertical wells can be deployed radially from a single well pad.
DMRB screening model	An empirical computer modelling tool that predicts future air quality pollutant concentrations as a result of road traffic characteristics under different scenarios.
Doomsday Survey	A survey of property ownership in England compiled on the instruction of William I for taxation purposed in 1086 AD.
Dust	Fine particles of solid materials capable of being re-suspended in air and settling only slowly under the influence of gravity where it may cause nuisance.
Effect	A physical or measurable change to the environment attributable to the project.
EIA Regulations	The Town and Country Planning (Environmental Impact Assessment) Regulations 2011
Emission	A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Environmental Assessment Levels (EALs)	For many substances which are released air quality objectives have not been defined. Where the necessary criteria are absent then Regulators (e.g. Environment Agency) have adopted interim values known as Environmental Assessment Levels (EALs). The EAL is the concentration of a substance which in a particular environmental medium the Regulators regards as a comparator value.
Environmental Impact Assessment (EIA)	A systematic means of assessing a development project's likely significant environmental effects.
Environmental Statement (ES)	Statutory report summarising the findings of an environmental impact assessment.
Exceedence	A period of time where the concentrations of a pollutant is greater than, or equal to, the appropriate air quality standard.
Fauna	Animal life
Features (Landscape Feature or Element)	A component part of the landscape (e.g. hedgerow, wood, stream)
Field Pattern	The pattern of hedges, fences and walls that define fields in farmed landscapes.
Findspot	Location of individual or groups of archaeological artefacts.
Flood Risk Assessment (FRA)	A desk based study which considers the contributing factors and

	predicts / quantifies the risk of flooding and also identifies a water level in the event of flooding.
Flood Zone	<p>There are four classifications for flood zones as defined in the National Planning Policy Framework (NPPF):</p> <ul style="list-style-type: none"> • Zone 1: Low probability (less than 1 in 1000 annual probability of river or sea flooding in any year); • Zone 2: Medium probability (between 1 in 100 and 1 in 1000 annual probability of river flooding or between 1 in 200 and 1 in 1000 annual probability of sea flooding in any year); • Zone 3a: High probability (1 in 100 or greater annual probability of river flooding in any year or 1 in 200 or greater annual probability of sea flooding in any given year); and • Zone 3b: High probability (functional flood plain. Essentially the 1 in 20 or greater annual probability of flooding in any given year).
Flora	Plant life
Flue	It is a chimney for conveying exhaust gases from the boiler to the outdoors.
Formation water	The water (brine) within the gas production or proposed disposal horizons which can reasonably be considered as connate, or sourced from geologically old recharge.
Foul water	Water which is contaminated by human or industrial waste.
Freeboard	Freeboard is a margin of error that is applied in modelling studies to account for inherent and unavoidable uncertainties in input data and modelling processes. In flood studies it is usually expressed as a depth value that is added to modelled flow levels to give a final flood level result (including uncertainty allowance).
Free-field Level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally as measured outside and away from buildings.
Frequency (Sound)	Frequency (or pitch) of sound is measured in units of Hertz. 1 Hertz (Hz) = 1 cycle/second. The range of frequencies audible to the human ear is around 20 Hz to 18000 Hz (or 18kHz). The capability of a person to hear higher frequencies will reduce with age. The ear is more sensitive to medium frequency than high or low frequencies.
Geophysical survey	A non-intrusive survey technique used to identify and map buried features. The use of geophysics to identify archaeological remains is usually based upon magnetometry (measuring small variations in the Earth's magnetic field) or resistivity (the resistance to electrical currents).
Glaciofluvial Drift	Materials (e.g. clays, silts, gravels, etc.) deposited by the combined action of rivers and glaciers, or from streams from glacial ice.
Glare	The uncomfortable brightness of the light source against a dark background which results in dazzling the observer, which may cause nuisance to residents and a hazard to road users.
Grange	An outlying farm belonging to a monastery or feudal lord.
Groundwater	Water which occurs in the strata above the Triassic Mercia Mudstone and can be reasonably attributed to relatively geologically recent recharge and which would reasonably be

	considered to be wholesome (potable) unless it has been contaminated (altered) by anthropogenic activity
Habitat	The environment in which populations or individual species live or grow.
Heavy Duty Vehicle	A vehicle type classification, including rigid and articulated heavy goods vehicles, plus buses and coaches, that is used by air quality dispersion models.
Heavy Goods Vehicle (HGV)	Vehicles over 7.5 tonnes gross weight or where noise calculations are concerned, vehicles of unladen weight exceeding 1,525 kg.
Heritage Asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets identified by the local planning authority (including local listing).
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora. Those elements of the historic environment that hold significance are called heritage assets.
Historic Environment Record (HER)	The repository for all archaeological and historical information relating to a county or district
Hydrology	The movement, distribution and quality of water throughout the earth.
Impact	A physical or measurable change to the environment attributable to the Proposed Development.
Imperceptible impact	A change in the annual mean concentration of a pollutant equivalent to 1% of the relevant air quality limit value or less.
Indicator species	Species (usually but not always flora) that are especially characteristic of semi-natural habitats. Individually they are often slow to colonise new ground and the presence of a collection of such species occurring together suggests that the habitat is semi-natural and of long continuity. Indicators relevant to the ES are those of ancient woodlands and grasslands on neutral soils ("mesotrophic" grasslands).
Iron Age	The period between about 700 BC and AD 47 (in Lincolnshire) characterised by the use of iron.
L _{A10}	The sound level (in dBA) exceeded for 10% of the time. This level gives an indication of the sound level during the noisier periods of time in any given sample. It has been used over many years to measure and assess road traffic noise.
L _{A90}	The sound level (in dBA) exceeded for 90% of the time. This level gives an indication of the sound level during the quieter periods of time in any given sample. It is used to describe the "background sound level" of an area.
L _{Aeq}	The equivalent continuous sound level in dBA. This unit may be described as the "notional steady noise level that would provide, over a period, the same energy as the intermittent noise". In other words, the energy average level. This unit is now used to measure a wide variety of noise of an industrial or commercial nature, as well as aircraft and trains.
L _{Amax}	The maximum level of sound measured in any given period. This unit is used to measure and assess transient noises, i.e. gun

	shots, individual vehicles etc.
Landform	Combinations of slope and elevation that produce the shape and form of the land.
Landscape Analysis	The process of breaking the landscape down into its component parts to understand how it is made up.
Landscape Assessment	An umbrella term for description, classification and analysis of the landscape.
Landscape Character	The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.
Landscape Character Area	Tract of landscape which may include several landscape types but which retains a recognisable local identity. They are related to a specific locality, and are therefore unique.
Landscape Character Type	Distinct unit of landscape where particular landform and land cover elements combine to produce relatively homogenous landscape character. Landscape types are generic in that they may occur in different parts of the country e.g. river floodplain, open, rolling downs.
Landscape Effects	Change in the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be positive or negative.
Landscape Sensitivity	The extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character.
Light Duty Vehicle	A vehicle type classification, including motorcycles, cars and light goods vehicles, that is used by air dispersion models.
Light spill	The unwanted spillage of light on to adjacent areas and may affect or cause nuisance to sensitive receptors, particularly residential properties and natural habitats.
Listed Building	The Secretary of State compiles a list of buildings of special architectural or historic interest for the guidance of local planning authorities in the exercise of their planning functions under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the Town and Country Planning Act 1990. Buildings are graded as follows: <ul style="list-style-type: none"> • Grade I – Buildings of exceptional interest, • Grade II* - Particularly important buildings of more than special interest; and • Grade II – Buildings of special interest.
Local Biodiversity Action Plan (LBAP)	The Local Biodiversity Action Plan is the agreed strategy for conservation and enhancement in a particular area which will help meet the UK BAP.
Local Development Documents (LDD)	Local Development Document is the collective name given to all documents within the local development framework.
Local Development Framework (LDF)	The local development framework is the portfolio of local development documents which provide the basis for delivering spatial planning strategy.

Local Plan	A detailed district or borough-wide land-use plan, prepared and adopted by a district planning authority, which is part of the statutory development plan. Consists of a written statement which sets out the district planning authority's development control policies and proposals for land use and transport over a period of about 10 years and an Ordnance Survey-based proposals map.
Local Planning Authority	The local planning authority is the district, borough, unitary, city or county council who are the body responsible for the preparation of development plans, processing planning applications and guiding development within the administrative area.
Local Transport Plan (LTP)	Local Transport Plans are developed by partnerships of local authorities, businesses, transport operators and service users as part of the New Deal for Transport initiative and aim to promote integrated local transport systems and to tackle problems of congestion and pollution (Department of Transport Local Government and the Regions, 2002)
Lockton Compound	The area adjacent to the Ebberston Moor 'A' Well Site owned by Northern Gas Networks which contains their Above Ground Installation allowing connection into the LTZ.
Magnitude	A combination of the scale, extent and duration of an effect.
Marine Regression	A fall in sea level relative to the land to expose a previously submerged surface.
Marine Transgression	A rise in sea level relative to the land, the shoreline moving towards higher ground resulting in flooding.
Medieval	The period of the Middle Ages between the early 5 th century and mid 16 th century AD.
Mesolithic	The period of the Middle Stone Age between some 9500 BC and 4000 BC characterised by hunter-gatherer communities.
Minor Inundation Zone	Flooding to a depth of between 0m and 0.25m and velocity less than 1 m/s
Minerals Planning Guidance Notes (MPG)	Documents issued by CLG setting out government policy and advice on minerals planning issues. Currently being replaced by Minerals Planning Policy Statements.
Mitigation Measures	Actions proposed to moderate adverse effects arising from the whole or specific elements of a development including any process, activity or design to avoid, reduce, remedy or compensate for adverse environmental effects of a development project.
National air quality objectives	A series of objectives set by the Government's Expert Panel on Air Quality to be achieved either without exception or with a permitted number of exceedances within a specific timescale. For nitrogen dioxide the annual mean limit value and the annual mean objective value are set at the same concentration.
National Parl	A national park is an area designated for its special landscape rich in character and distinctiveness, wildlife history and heritage.
Neolithic	The period of the New Stone Age between about 4000 BC and 2500 BC characterised by the first settled agricultural communities.
Nitrogen deposition	Nitrogen deposition is the term used to describe the input of reactive nitrogen species from the atmosphere to the biosphere.

Noise	Noise defined as unwanted sound, is measured in units of decibels, dB. The range of audible sounds is from 0dB to 140 dB. Two equal sources of sound, if added together will result in an increase in level of 3 dB i.e 50dB + 50dB = 53 dB. Increases in continuous sound are perceived in the following manner: 1dB increase – barely perceptible 3dB increase – just noticeable 10dB increase – perceived as twice as loud
Notable species	Notable species are those that are recognised (e.g. as rare, scarce, flagship species etc.) as warranting particular attention in a legal or local policy context.
Non Technical Summary	A report which briefly describes the main points discussed in the Environmental Statement in a clear manner, without the use of technical jargon and phraseology.
Off-site planting works	Planting proposed on land outside of the Application Site to be implemented by legal agreement.
Old English	The language used by the Saxon (q.v.) occupants of Britain.
Particulate Matter	Solid particles or liquid droplets suspended or carried in the air.
Permeability	The property or capacity of a rock, sediment or soil to transmit a fluid; it is a measure of the ease of fluid flow under unequal pressure.
Phase 1 Habitat Survey	An ecological survey technique that provides a standardised system to record vegetation and wildlife habitats. It enables a basic assessment of habitat type and its potential importance for nature conservation. Each habitat type or feature is identified and presented on a map.
Photomontage	A type of visualisation or illustration that is based on photographs and that simulates the likely appearance of a proposed development in the photographic view.
PICADY	A computer program for predicting capacities, queue lengths and delays at non-signalised major/minor priority junctions
Pig	Pipeline Inspection Gauge
Pig Launcher/Receiver	A device to launch or receive a ball or intelligent monitoring device (PIG) introduced into a pipeline to clear or monitor its conditions.
Planning Practice Guidance	The Department for Communities and Local Government (DCLG) launched this planning practice guidance web-based resource in March 2014.
Planning Policy Statement (PPS)	There are a series of PPSs that replace the PPGs covering various aspects of the planning system prepared by Central Government and due weight must be given to them when considering individual planning applications as they are material factors in their determination. They are listed on the Department for Communities and Local Government website.
PM _{2.5}	Particulate matter with a mean aerodynamic diameter of less than 2.5µm.
PM ₁₀	Particulate matter with a mean aerodynamic diameter of less than 10µm.
Post-medieval	The period from the mid 16 th century to the end of the 19 th century, including the Industrial Revolution in the mid 18 th century.

Pound	A walled structure to house livestock or other animals.
Predicted Environmental Concentration (PEC)	Predicted Environmental Concentration (PEC) is the Process Contribution combined with an appropriate long-term or short-term background concentration.
Prehistory	A cover-term for the earlier part of England's past, generally taken to mean the period before the existence of written records. In practice, however, prehistory in England is taken to end with the Roman invasion in the mid first century AD. Prehistory is conventionally divided into five broad phases: Palaeolithic, Mesolithic, Neolithic, Bronze Age and Iron Age (q.v).
Pressure Safety Valves (PSV)	Pressure relief valves protect vessels from over-pressure. In the Vale of Pickering fields these are open to atmosphere. In this, more modern design discharges from PSVs are 'collected' in a closed system.
Process Contribution	Process Contribution (PC) are the predicted concentrations emitted from a process alone.
Production Water	
Produced water	The water (brine) produced from the gas production formation in association with the extraction and separation of gas or the development of the well.
Development	Natural gas production and water re-injection at the existing borehole at Ebberston Moor South Well Site, the drilling of a second borehole for water production and re-injection, the construction of a 13.9km 12" diameter underground pipeline from the Ebberston Moor South Well site to the Knapton Generating Station at East Malton, Knapton and the construction of ancillary works at the Generating Station.
Public Open Space	Open space, designated by a local authority, defined where public access is generally not formally established, but which fulfils or is capable of fulfilling a recreational and/or non-recreational role (for example, amenity, ecological, educational, social or cultural). It includes most nature reserves, city farms, cemeteries, reservoirs (including covered reservoirs) and some private institutional and housing estate grounds which are not considered suitable for building development. Public Open Space does not include school playing fields nor the amenity areas associated with the development of homes or flats or pedestrian precincts (Local Government Act 1966 Section 8).
Public Right of Way (PROW)	A right of passage by the public over the surface of the land without impediment. Public Rights of Way include public footpaths, bridleways and byways open to all traffic and Restricted Byways.
Receptor	A component of the natural, created or built environment such as human being, water, air, a building, or a plant that has the potential to be affected by the Proposed Development.
Registered Historic Parks and Gardens	A register of historic parks and gardens held by English Heritage for parks and gardens of particular historic importance.
Residual Effects	Those effects of a development that cannot be mitigated following implementation of mitigation proposals.
Ridge and furrow	The remains of arable cultivation consisting of raised rounded strips separated by furrows. It is characteristic of open field agriculture.
Romano-British	The period dating from AD 43-410 when the Romans occupied

	Britain.
Round Barrow	Circular mounds of earth and stone raised over a central burial(s) and usually, but not exclusively, dating to the Bronze Age.
Ruderal	Plant species typical of the early stages of colonisation of disturbed ground, often short-lived species, or the community formed by a collection of such species in recently disturbed habitat.
Run-off	Precipitation (rain, snow, hail, etc) snow melt or irrigation water that appears in uncontrolled surface streams, rivers, drains or sewers.
Salterns	Areas used for saltmaking, often associated with ponds as well as structures for heating brine in pans.
Scour channel	Erosion or scouring of a channel by water.
Scheduled Monument	A building included in the Schedule of Monuments compiled under Section 1 of the Ancient Monuments, and Archaeological Area Act 1979. Scheduled Monuments have statutory protection under this Act (Section 2) and an application for Scheduled Monument Consent must be made to the Secretary of State for Culture, Media and Sport if work to a Scheduled Monument is proposed. The Secretary of State for Culture, Media and Sport is responsible for the scheduling under the provisions of the Ancient Monuments and Archaeological Areas Act 1979. Scheduled Monuments are excluded from Listed Building control procedures.
Scoping	An exercise undertaken to determine the topics to be addressed within the Environmental Statement.
Screening	Consideration as to whether an environmental impact assessment is required for a project.
Scrub	Vegetation consisting of stunted trees, bushes and other plants.
Section 106 Agreement	Section 106 (S106) of the Town and Country Planning Act 1990 allows a local planning authority (LPA) to enter into a legally-binding agreement or planning obligation with a landowner in association with the granting of planning permission. The obligation is termed a Section 106 Agreement.
Seismic data	Seismic data originates from surveys that investigate subterranean rock structures to provide a picture of underground rock structures that may yield petroleum, minerals and ores of economic value.
SEL	<p>The sound energy of a transient event may be described by a term SEL – Sound Exposure Level. This is the LAeq level normalised to one second. That is the constant level in dBA which lasting for one second has the same amount of acoustic energy as a given A weighted noise event lasting for a period of time. The use of this unit allows the prediction of the LAeq level over any period and for any number of events using the equation:</p> $LAeqT = SEL + 10\log n - 10 \log T \text{ (dB)}$ <p>Where n = number of events in time period T T = Total sample period in seconds.</p> <p>In the open, known as free field, sound attenuates at a rate of 6 dB per doubling of distance. This is known as geometric spreading or sometimes referred to as the Inverse Square Law. As noise is measured on a logarithmic scale, this attenuation in distance = 20 log(ratio of distances), e.g. for a noise level of 60</p>

	dB at ten metres, the corresponding level at 160 metres is: $60 - 20 \log 160/10 = 60 - 24 = 36$ dB
Setting	The surroundings in which (the asset) is experience. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
Sidetrack	A new well bore drilled from an existing well bore deviating at various possible angles (including horizontal).
Significance (heritage)	The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic.
Site of Importance for Nature Conservation (SINC)	Non-statutory designation selected at Local Authority Level for a site of nature conservation interest.
Site of Special Scientific Interest (SSSI)	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. SSSIs include wildlife habitats, geological features and landforms.
Sky glow	The upward spill of light into the sky which can cause a glowing effect and is often seen above cities when viewed from a dark area.
Slug Catcher	A pressure vessel positioned at the end of a gas pipeline to catch any liquids which might be swept over during operation
Soke	Land considered to be the property of the occupying peasants, rather than the lord of the manor. Also, land that, although within one manor, came under the jurisdiction of a separate manor.
Species	A group of interbreeding organisms that seldom or never interbreed with individuals in other such groups, under natural conditions; most species are made up of subspecies or populations.
STATS 19	The set of data collected by a Police Officer when an incident involving injury occurs on any road in Great Britain.
Sustainable Drainage System (SuDS)	Sustainable management practices designed to control the rate and quality of surface water runoff into receiving waters, for example the use of swales and wetlands as buffers, as opposed to conventional drainage practices.
Sustrans	A UK charity which aims to encourage non-car driver modes of travel
TEMPRO	A computer program designed to allow analysis of pre-processed trip-end, journey mileage, car ownership and population/workforce planning data. It enables the user to calculate the growth rate between selected base and future years.
Test Separator	Located on the well site to test the constituents of the fluid produced from each well.
Topography	The natural or artificial features, level and surface form of the ground surface.
TRADS	A database of motorway and trunk road traffic flow data from the Highways Agency's permanent monitoring sites on the network.
Transport Assessment	A quantitative assessment of transport effects of construction and

	operational phases of the proposed development.
TRICS	A database containing surveys of various land uses, from which trip rates can be derived.
Upward Light of the Installation (ULR)	The maximum permitted percentage of luminaire flux that goes directly into the sky.
Vent stack	Slender 30m high stack to vent gas into the atmosphere during major maintenance or in emergency.
Visual amenity	The value of a particular area or view in terms of what is seen.
Visual effect	Change in the appearance of the landscape from available viewpoints as a result of development.
Visual envelope	Extent of visibility to or from a specific location or site.
Visualisation	A computer simulation, photomontage or other technique to illustrate the appearance of a proposed development.
Water bearing formation	A geological unit (or formation) which contains formation water.
Way leave	Right to install the gas pipeline and access to it.
Zone of Theoretical Visibility (ZTV)	Areas from which a specified element of a development may be visible.