

Development Control Committee

Meeting to be held 23 June 2015

Electoral Division affected: FYLDE WEST
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Fylde Borough: application number. LCC/2014/0096

Construction and operation of a site for drilling up to four exploration wells, hydraulic fracturing of the wells, testing for hydrocarbons, abandonment of the wells and restoration, including provision of an access road and access onto the highway, security fencing, lighting and other uses ancillary to the exploration activities, including the construction of a pipeline and a connection to the gas grid network and associated infrastructure to land to the north of Preston New Road, Little Plumpton.

Appendix 1 – 21

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Executive Summary

Application - Construction and operation of a site for drilling up to four exploration wells, hydraulic fracturing of the wells, testing for hydrocarbons, abandonment of the wells and restoration, including provision of an access road and access onto the highway, security fencing, lighting and other uses ancillary to the exploration activities, including the construction of a pipeline and a connection to the gas grid network and associated infrastructure to land to the north of Preston New Road, Little Plumpton.

This application was deferred at the Development Control Committee meeting of 28th January 2015 to enable 'further and other information' submitted by the applicant in respect of noise, air quality and landscape and visual amenity to be considered. The further information was advertised and consulted on. This report assesses the 'further information' and those responses received as part of the consultation process.

Recommendation – Summary

That after first taking into consideration the environmental information and further information, as defined in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 submitted in connection with the application, planning permission be granted subject to conditions controlling time limits, working programme, restriction on permitted development rights, highway matters, soil management, hours of working, safeguarding of water courses, control of noise, dust, lighting, security, ecology, archaeology, landscaping, restoration and aftercare.

Background

This application along with planning applications LCC/2014/0097, LCC/2014/0101 and LCC/2014/0102 were presented to the Development Control Committee meeting on 28th January 2015. The Committee had previously received presentations on the applications on Friday 23rd January and Monday 26th January from a number of groups and organisations opposing the applications and from the applicant in support.

The Chair of the Committee announced to the Committee that on Friday 23rd January 2015, the applicant had submitted additional further and other information ('further information') in relation to planning applications LCC/2014/0096 and LCC/2015/0101 and that the applicant had requested a deferral of consideration of the items, in accordance with Regulation 22 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. The applicant had expressed a willingness to agree to time extensions for the applications to be determined for a further period.

Following advice on the legal position the Committee resolved that consideration of the applications LCC/2014/0096 and LCC/2014/0101 be deferred. The Committee was further advised that should it resolve to defer applications LCC/2014/0096 and LCC/2014/0101, the applicant had confirmed they would also accept deferral on applications LCC/2014/0097 and LCC/2014/0102 so that all the applications could be considered at the same time. The Committee resolved that consideration of applications LCC/2014/0097 and LCC/2014/0102 also be deferred.

The minutes to the meeting are appended as 19.

The submitted further information was subsequently advertised and consultation carried out. This report includes a summary of presentations made in advance of the Committee meeting and those representations received post finalisation of the committee report and reported on the update sheet circulated to the Committee in advance of the meeting (Appendix 20); and a summary of those further representations received following the advertising of the further information and an assessment of the further information in the relevant appendices and sections of the report and updates to relevant sections of the report to address those matters raised in representations. For the purposes of this application the further information relates specifically to noise, air quality and landscape and visual amenity.

Introduction

This application is one of two for the construction and operation of sites for drilling up to four exploration wells, hydraulic fracturing of the wells, testing for hydrocarbons, abandonment of the wells and restoration, including provision of access roads and access onto the highway, security fencing, lighting and other uses ancillary to the exploration activities, including the construction of pipelines and connection to the gas grid network and associated infrastructure. The application the subject of this report is to develop land to the north of Preston New Road, Little Plumpton. The

other application for similar development is at Roseacre Wood, Roseacre (ref LCC/2014/0101). The two applications are supported by applications for monitoring arrays. Application LCC/2014/0097 for a monitoring array associated with the Preston New site is also reported on this agenda and should be read in conjunction with this application. Application LCC/2014/0102 is for a monitoring array associated with the Roseacre Wood site and is reported on the agenda with planning application LCC/2014/0101.

Applicant's Proposal (Appendix 1)

Planning permission is sought for the construction and operation of a site for drilling up to four exploration wells, hydraulic fracturing of the wells, testing for hydrocarbons, abandonment of the wells and restoration, including provision of an access road and access onto the highway, security fencing, lighting and other uses ancillary to the exploration activities, including the construction of a pipeline and a connection to the gas grid network and associated infrastructure to land to the north of Preston New Road, Little Plumpton. A supporting application for the installation of a monitoring array of 80 boreholes for seismic and water quality within the surrounding area has also been submitted (ref LCC/2014/0097).

The applications are supported by a Planning Statement (PS), Supporting Documents, an Environmental Statement (ES) and a Non-Technical Summary (NTS). The PS includes a Sustainability Appraisal and the Supporting Documents include a Flood Risk Assessment, Utilities Statement and a Statement of Community Involvement.

The ES provides a full description and assessment of the following:

- The application site and surroundings
- A description of the proposed development
- Scheme alternatives
- Air Quality
- Archaeology and cultural heritage
- Greenhouse gas emissions
- Community and socio economics
- Ecology
- Hydrogeology and ground gas
- Induced seismicity
- Land Use
- Landscape and visual amenity
- Lighting
- Noise
- Resources and waste
- Transport
- Water resources
- Public health

The ES was also supported by further information submitted by the applicant in response to matters raised by consultees and in response to comments made by third parties and interest groups.

The main elements of the proposal are described below with a more detailed description provided in Appendix 1:

The applicant submitted further and other information in November and December 2014 in relation to the Environmental Statement in accordance with Regulation 22(3) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. The applicant then submitted further and other information in respect of noise, traffic, air quality and landscape in relation to the Environmental Statement in accordance with Regulation 22(3) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 in February 2015.

The further information was advertised and consultation carried out. The further information for the Preston New Road site relates specifically to noise, air quality and landscape and visual amenity.

Proposed Development.

The proposed development is for the exploration and analysis of shale gas reservoirs within the Bowland Shale formation in the Fylde district of Lancashire. The shale gas (also called methane gas or natural gas) is known to be distributed within the shale rock. The total area of the surface works is 7.34ha. In addition lateral drilling and hydraulic fracturing would be undertaken in an underground quadrant which could extend up to a maximum distance of 3km from the centre of the well pad.

A well pad would be constructed and wells would be drilled into the shale rock. A process called hydraulic fracturing would then be used to help the gas flow out of the rock by pumping water and other materials into the shale to dislodge the gas. The gas then flows back to the surface within the flow back fluid.

The proposed development would explore the potential flow rate of the gas in order to establish whether the gas can be extracted and if it would be economically viable to do so. Following exploratory activities the site would be abandoned and restored unless the site is found to be economically viable, in which case a planning application would be submitted for production works before the site is decommissioned.

Site Location and Description

The proposed development involves surface works and underground works.

Surface Development Site

The development site for the surface works is a greenfield site located to the north of Preston New Road (A583) and east of Moss House Lane, between Wesham and Kirkham towns and Blackpool.

The closest residential properties to the site are located at Staining Wood Cottages/ Foxwood Chase to the south of the site. The village of Little Plumpton is located approximately 500m to the east of the site with the neighbouring village of Great Plumpton located 900m to the north east. Approximately 800m to the north and east of the site are Moss House Lane properties. Approximately 1200m along Preston

New Road, two residential mobile home sites, Carr Bridge and Lyndale are located and further west is Penny Farm, a World Horse Welfare centre.

The development site is currently in agricultural use and is classified as Grade 3a (good) and 3b (moderate) quality agricultural land. The size of the development site would be approximately 7.34ha, of which an area of approximately 2.65ha would be for the exploration site (well pad and access track) and an area of approximately 4.69ha for the extended flow test pipeline and the gas grid connection.

The majority of the development site would be bounded by fields on all sites. Preston New Road would form the southern boundary for the proposed access track and interconnecting gas pipeline. The site is currently accessed by crossing fields from Preston New Road, Moss House Lane or Plumpton Lane. Land surrounding the development site is in agricultural use for grazing and arable farming.

The site has an undulating topography with slopes towards Carr Bridge Brook valley which is located to the north of the development site. The site is located within the Lancashire County Council landscape character classification Coastal Plain. The development site has a height of 12-14m AOD, in comparison to the land at Little Plumpton at 25AOD and at Great Plumpton at 35m AOD.

The Carr Bridge Brook, located approximately 200m north of the site at the northern field boundary, discharges into a main drain to the rear of Moss House Lane. The main drain discharges into the Ribble Estuary which is approximately 6km away from the development site. A number of ponds are also located around the development site within the agricultural fields and these may be used by grazing animals. The development site has been categorised by the Environment Agency as being in Flood Zone 1 (low probability), this means that the probability of fluvial flooding each year is less than 0.1% (1 in 1000) from the nearby watercourses.

To the south of the site the A583 Preston New Road is a single carriageway illuminated road with a footway on the southern side. There are dedicated cycle lanes on each side. Preston New Road connects Preston to the east with Blackpool to the west. Preston New Road is connected to the M55 motorway at Junction 4. The M55 motorway is located approximately 1km to the north of the development site.

Underground Exploratory Works

The maximum extent of the below ground works (for vertical and horizontal drilling and hydraulic fracturing) as projected to the surface would extend to a total area of 562ha in a quadrant shape. The northern extent of the quadrant would be around Wildings Wood located to the north of Junction 4 of the M55 with the eastern extent of the quadrant around the village of Little Plumpton. The southwest extent would run from Humber Wood towards Lower Balham village with the western extent in the vicinity of Whitehill Road, Blackpool.

The majority of the surface area of the underground works is currently in agricultural use. The surface also includes sections of roads including the M55 motorway, Preston New Road (A583), Moss House Lane, Peel Road and Whitehill Road. The above ground area includes the village of Little Plumpton and residential/commercial properties located along local roads including Preston New Road, Moss House Lane,

Peel Road and Whitehill Road properties. At Whitehill Road a major mixed use development is also located.

Background

There is no relevant planning history to the proposed site.

A number of planning permissions were previously granted for unconventional shale gas exploration operations involving the drilling of a vertical borehole and hydraulic fracturing in 2010. The ones at Grange Road, Preese Hall and Anna's Road in Fylde and Banks Marsh (Beconsall) in West Lancashire were implemented with boreholes being drilled.

The Preese Hall site was the only well that was drilled and then hydraulically fractured. The fracturing caused two seismic events. A moratorium on hydraulic fracturing was subsequently imposed by the Government in May 2011. The Government's Chief Scientific Officer appointed the Royal Society and the Royal Academy of Engineering to undertake an assessment whether hydraulic fracturing could be carried out safely. The conclusion was that it could subject to a number of recommendations. Consequently the Department of Energy and Climate Change (DECC) lifted the moratorium in December 2012, no further hydraulic fracturing has taken place. The boreholes at Annas Road and Preese Hall site have been abandoned and the wells plugged and the sites restored. The sites have or are being restored. Planning permission for extended periods of pressure testing has been granted at the Beconsall site but refused at the Grange Road site.

The applicant undertook a 3-dimensional (3D) geophysical seismic survey in June 2012, which covered an area of approximately 100km² to identify locations of geological faults and to identify the a workable area of the Bowland shale for exploration activity including hydraulic fracturing. The applicant owns and operates an existing gas production facility at Elswick that was first granted planning permission for exploration in the 1980's and went into production in the 1990s. However, this site targeted a different geological horizon to that currently proposed and did not involve high pressure hydraulic fracturing as currently proposed.

Policy

European Policy

EU Habitats Directive

National Policy and guidance

White Paper: Energy – Meeting the Challenge

Climate Change Act Of 2008

The UK Low Carbon Transition Plan

National Policy Statement for Energy

Gas Generation Strategy

DECC About shale gas and hydraulic fracturing (fracking) 30 July 2013

House of Commons Standard Note Shale Gas and Fracking 22 January 2014

HSE	Shale gas and hydraulic fracturing (fracking) Q&A
EA	Regulatory Position Statement Onshore oil and gas well decommissioning and abandonment for well prior to 1 October 2013
UKOOG	UK Onshore Shale Gas Well Guidelines – Exploration & Appraisal phase 1 February 2013
CIWEM	Shale Gas and Water January 2014

Planning Policy

National Planning Policy Framework (NPPF)

Paragraphs 11-14	Requirement for Sustainable Development
Paragraph 17	Core Planning Principles
Paragraphs 56-66	Requirement for Good Design
Paragraphs 100	Flood Risk
Paragraph 103	Requirement for Flood Risk Sequential Test
Paragraphs 109-112	Conserving and Enhancing the Natural Environment
Paragraphs 118-125	Conserve and Enhance Biodiversity
Paragraphs 142-148	Facilitating the Sustainable use of Minerals
Paragraphs 186-216	Decision-making

National Planning Policy Guidance (NPPG)

Air Quality	Air quality impacts
Climate Change	Mitigation and adaption measures
Design	Key design points
Flood Risk and Coastal Change	Flood Risk Assessment
Health and Well Being	Healthy communities / environmental risks
Land Stability	Risk of Unstable Land/ subsidence
Light Pollution	Obtrusive light impacts
Minerals	Mineral Extraction
Natural Environment	Protect biodiversity
Noise	Manage noise impacts
Water supply, wastewater, water quality	Quality and infrastructure

Planning Practice Guidance (PPG) Planning for Hydrocarbon extraction

Joint Lancashire Minerals and Waste Development Framework Core Strategy Development Plan documents (LMWDF) (Appendix 21)

Policy CS1	Safeguarding Lancashire's Mineral Resources
Policy CS5	Achieving Sustainable Minerals Production

Joint Lancashire Minerals and Waste Local Plan – Site Allocation and Development Management Policies – Part One (LMWLP) (Appendix 21)

Policy NPPF 1	Presumption in favour of sustainable development
Policy DM2	Development Management

Joint Lancashire Minerals and Waste Supplementary Planning Guidance

SPD	Oil and gas exploration, production and distribution (draft)
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Fylde Borough Local Plan (Appendix 21)

Policy SP2	Development in Countryside Areas
Policy EP11	Building Design and Landscape Character
Policy EP12	Conservation of Trees and Woodland
Policy EP15	European Nature Conservation Sites
Policy EP16	National Nature Reserves
Policy EP17	Biological Heritage Sites
Policy EP23	Pollution of Surface Water
Policy EP24	Pollution of Ground Water
Policy EP26	Air Pollution
Policy EP27	Noise Pollution
Policy EP28	Light Pollution

Consultations

The following bodies have been consulted on the application and supporting documents as initially submitted and on subsequent information / clarification /comment provided by the applicant in response to requests for further information or comments made, and on the further information submitted by the applicant or have made representations on the application. Their views in respect of the application as initially submitted and where appropriate on the clarification information provided by the applicant and on the further information are summarised as follows:

Department of Energy and Climate Change (DECC): Confirmed the details of the petroleum licence for the surface site and the maximum extent for underground drilling. The licences give exclusive rights within the applicant's area for exploration, boring for and getting petroleum, but do not waive any other legal requirement applicable to these activities, including requirements for planning permission.

DECC requires the operator to produce Environmental Risk Assessments, taking account of guidance published to the industry by them in April 2014, which flows from the recommendations of the Royal Academy of Engineering and the Royal Society, in their report on the hazards of hydraulic fracturing for shale gas published in June 2012.

Drilling of wells requires Secretary of State consent under the terms of the licence and DECC will undertake a number of checks regarding well targeting and operator funds and insurance before giving consent. With regard to drilling practice, DECC has clarified that drilling through a fault does not entail any seismic hazard.

DECC also requires for hydraulic fracturing, the implementation of measures to mitigate seismic risk including the submission to DECC of a detailed Hydraulic Fracturing Programme (HFP) for each well to be hydraulically fractured. DECC will monitor the conduct of fracturing operations in accordance with the HFP. DECC is of the view that in principle hydraulic fracturing through a fault should be avoided. The applicant has stated that they plan to avoid all detectable faults (whether local or regional), which is the correct approach. The applicant's 3D data will be scrutinised through the review of the HFPs to ensure that the full extent of the stimulated rock volume preserves a safe distance from any detectable fault. The fracturing fluids will therefore never enter a fault and will not be transmitted along it.

DECC consider the traffic light system for shutting down operations to be adequate as the association between hydraulic fracturing and seismic activity remains a developing area of knowledge. Careful monitoring of seismic activity in real time is likely to detect precursor events, providing scope to halt operations, reduce stresses and avoid more substantial tremor. DECC would explore the implications of any red light event promptly with a view to deciding whether operations can be resumed without undue risk of disturbance to local residents and if so what operations are acceptable and whether any further precautions are appropriate.

Proposals to flare gas during the initial testing phase will require the consent from the Secretary of State under the Energy Act 1976 and any venting is subject to DECC consent. Any venting should be reduced to a minimum. DECC's standard online drilling consent allows 96 hours of testing. To test for a longer period, the applicant will need to apply to DECC for a paper-based Extended Well Consent. DECC will expect the operator to minimise flaring during the period of any Extended Well Consent.

Abandonment of any well requires the Secretary of State's consent under the terms of the licence. DECC will check for completeness of well data before giving consent. No further comment was received in relation to the further information.

Ministry of Defence (Safeguarding) (MOD): No objection.

No further comment was received in relation to the further information.

Blackpool Borough Council: No objection - no specific comments to make on the proposal.

No further comment was received in relation to the further information.

Fylde Borough Council: Object for the following summarised reasons:

- The proposed drilling operations would be in relatively close proximity to residential properties and the noise and general disturbance from 24 hour drilling operations and associated activity would be significant.
- Contrary to Policy DM2 of the Minerals and Waste local Plan.
- Contrary to Policies EP26, EP27 and EP28 of the Fylde Borough Local Plan, which is considered to be in conformity with the provisions of the NPPF.

The Borough Councils Environmental Protection Team has advised and made recommendations as follows:

- The exclusion of a sensitive noise receptor in the applicants noise report may mean current calculations are artificially elevated resulting in the prediction that noise levels will not exceed current background levels.
- Recommend that the applicant ensures that there are continuous sound level monitoring at the nearest residential property to ensure sound levels accord with WHO guidelines.
- Recommend that no HGVs arrive at or leave the site between 23:00 and 07:00.

- Recommend continuous monitoring of air quality as a result of increase in road traffic to demonstrate that AQ guidelines are being met, alongside EA monitoring of air pollutants from chemicals and flare burn off.
- Recommend dust significance should be reclassified from medium to large, due to a large site size and increased HGV movements on the roadways, with further mitigation measures to be implemented
- Recommend a plan to be provided detailing the predicted lux levels originating from the site to the vicinity. As a rural area, which is very dark at night, any increase in illumination will be more prevalent. Lighting should only be permitted as the minimum needed for security and/or working purposes and that it minimises the potential for obtrusive light from glare or light trespass to an acceptable level and in accordance with guidance for mineral sites.

In respect of the further information the Borough Council advised that their position remains unchanged.

Westby-with- Plumptons Parish Council: Object and recommend the application should be refused for the following summarised reasons:

- The proposed development would introduce an industrial form of development into a rural setting which will be of detriment to resident's quality of life.
- The value and saleability of properties will drastically diminish.
- The proposed development is located too close to some resident's properties.
- Noise pollution day and night from the 24hour operation.
- Air pollution to any degree is unacceptable.
- Evidence of earth tremors from Cuadrilla's activities elsewhere.
- Residents' concerns over structural damage to properties, including Carr Bridge Residential Park, from vibrations from heavy plant and machinery.
- Concern regarding the visual aesthetic of the site, which requires screening.
- Major concerns over the highway access to the site, which is a renowned black spot. Traffic lights should be installed.
- Concern regarding the suitability of A and B roads for additional traffic and the Kingfisher pub roundabout for larger vehicles.
- No evidence is given regarding compensation availability for damage occurring due to the fracking process, including structural damage, long-term land side effects and flooding.
- Impacts on the natural drainage system and potential damage to any asbestos in the underground system.
- Concerns regarding water contamination and the disposal of contaminated water.
- Inconvenience of anti-fracking protestors, affecting resident's quality of life and in turn the need for and cost liability of extra policing.
- Parishioners feel they are 'guinea pigs' in a fracking trial that is being rushed through without guarantees regarding environmental effects, safety precautions and compensation for affected people, properties and the environment.
- Concern regarding control and enforcement of the rules and regulations.

The Parish Council has requested that if planning permission is granted that the site and process is policed at all times; that residents are kept informed of all processes; emergency contingency plans are made public; compensation guarantees are put in

place; access to land is pre-approved by landowners and a liaison committee is established to work with representatives from the applicant, neighbouring properties, police, planning and environment officers from Lancashire and Fylde councils.

In respect of the further information the Parish Council advised that their position remains unchanged.

Medlar-with-Wesham Parish Council and Kirkham Town Council: Objects for the following summarised reasons:

- The potential major problems outweigh the benefits.
- The Chartered Institute of Environmental Health has highlighted shortcomings of the regulatory system regarding local environment and public health risks.
- Potential for earth tremors despite the traffic light system. Tremors can damage property and associated services including septic tanks. Any damage to underground services could result in watercourse pollution.
- Air pollution from gas emissions. Flaring can lead to over 250 pollutants including methane.
- Potential well failure and the huge potential for land contamination, particularly to aquifers and agricultural land.
- Light pollution from the 24hour operation.
- Potential flow back water site leakages and spillage during disposal and transportation.
- No information on water treatment plans. Where will flow back water be treated and will any new treatment plan accept waste from other UK sites.
- Increasing vehicle movements, particularly HGV's will exacerbate existing problems along the A585 and at the M55 Junction 3 at peak times.
- Increase in ambient noise levels from the continuous operation of this site and any future sites in the parish.
- Potential impact on resident's water supplies.
- The visual impact of the development cannot be minimised.
- Detrimental impact on property values and insurance premiums.
- Concern regarding future site expansion for production following exploratory phase. An increase in well heads will lead to further noise, traffic and pollution.
- Impact on local Wildlife including wintering and migrating birds, birds of prey, game birds, garden birds and bats from increased noise, traffic and lighting.

No further comment was received in relation to the further information.

Halsall Parish Council: Support the resolution of the Lancashire Association of Local Councils (AGM held on 14th November 2014) that L.A.L.C. and N.A.L.C. urge individual Parish and Town Councils to consider opposition to applications for fracking in their areas, in recognition that the potential damage to the environment is irreversible and no payment from fracking companies can compensate for any such damage and consequently object to the current proposals.

Health & Safety Executive (HSE): No objection; the proposed operations will be conducted in accordance with recognised regulations standards and good industry practice. From a well's operations perspective there are no issues or concerns with the proposals.

HSE has provided clarification of relevant regulations applicable to onshore well; how it regulates shale gas activity; what information it requires and working with the EA. HSE's regulatory framework ensures that information is provided at key stages in the lifecycle of a well and allows HSE inspectors to assess whether risks are being adequately controlled and if not to take the appropriate regulatory action.

The Health and Safety at Work Act 1974 (HSWA) requires those who create health and safety risks to workers or the public as part of their undertaking have a duty to manage and control the risks so far as is reasonably practicable. This is supplemented with more specific regulations particular to the extraction of gas and oil through wells, which includes shale gas operations.

The Borehole Sites and Operations Regulations 1995 (BSOR) applies to all onshore oil and gas wells. These Regulations require notifications to be sent to HSE about the design, construction and operation of wells, and the development of a health and safety plan which sets out how risks are managed on site.

To comply with BSOR the well operator must submit a notification to HSE at least 21 days before work commences. The notification includes information on the design of the well, the equipment to be used to construct it, the programme of work, the location, depth and direction of the borehole, the relationship to other wells and mines, the geology of the drilling site and identified risks and their proposed management. The HSE will assess the well design before construction starts and will identify any issues which will have an impact on well integrity. Any issues will be addressed by the operator and safety features will be incorporated into the design. Further notifications are required if there are any material changes to the information previously supplied.

The Offshore Installations and Wells (Design and Construction) Regulations 1996 (DCR) includes specific requirements for all wells, whether onshore or offshore, and include well integrity provisions which apply throughout the life of shale gas or oil wells. They also require the well operator to send a weekly report to HSE during the construction of the well so that inspectors can check that work is progressing as described in the notification.

To comply with DCR the operator must report to HSE every week during construction and during work to abandon the well, to provide HSE with assurance that the operator is constructing and operating the well as described in the notification. The weekly report details well integrity tests, the depth and diameter of the borehole, the depth and diameter of the well casing and details of the drill fluid density. The drill fluid density allows the inspector to gauge the pressure in the well and identify any stability issues.

If the operator is not complying with the notification, the HSE can take appropriate regulatory action. HSE uses a risk based interventions on particular sites and operators and to ensure well integrity. The HSE has a team of expert well engineers who cover hydrocarbon wells onshore and offshore. In considering well integrity a lifecycle approach is used including notifications. Weekly well reports, operator meetings and on-site inspections being used to manage the risks appropriately.

The operator must also appoint an independent well examiner in a quality control role who will ensure that the well is designed, constructed, operated and abandoned

in accordance with industry and company standards and that regulatory requirements are met. Specialist well engineers help develop best practice standards for the onshore industry with the United Kingdom Onshore Operators Group (UKOOG). All members of UKOOG have to comply with the latest standards published in February 2013.

A well operator must also report to HSE any occurrences covered by RIDDOR – Reporting of Injuries, Diseases and Dangerous Occurrences Regulations. These could include a blowout (i.e. an uncontrolled flow of well fluids); the unplanned use of blowout prevention equipment; the unexpected detection of hydrogen sulphide (H₂S) which is an explosive gas; failure to maintain minimum separation distance between wells and mechanical failure of any safety-critical element of a well. HSE can investigate any well incidents that would have an effect on well integrity and ensure the operator improves their operations.

Since 2012, the HSE and the EA have an agreement covering joint regulation of shale gas operations. HSE and EA inspectors will meet all new and first-time operators of shale gas wells to advise them of their duties under the regulations and to jointly visit all shale gas sites during the exploratory gas phase of shale gas development.

In response to comments raised by FOE of the Earth in their representation to the proposed development, HSE have clarified the following:

- HSE continued to monitor the Preese Hall site during abandonment activity and that there has been no unplanned release of fluids from the well.
- HSE will continue to monitor abandonment activity on all onshore and offshore wells to ensure all work is completed to industry standards and the risk of release of fluids from wells post abandonment is as low as reasonably practicable.
- With regard to risk of leaks from gas wells and the risk of exposure to benzene, the DCR sets out the requirement that there should be no unplanned release of fluids from the well so far as is reasonably practicable. The HSE will review well notification information to ensure that the operator is managing the risks in such a way that the well is designed, constructed and abandoned safely.
- BSOR Regulation 10 requires the well operator to provide all persons engaged in borehole operations with appropriate health surveillance.
- The HSE is aware of the warning issued by NIOSH regarding exposure to silica. The HSE will look at how the well operator manages exposure to silica. It is expected that sealed units will deliver sand to site and mix it into fracturing fluid so that the exposure risk is minimised.
- HSE do not consider that the regulations are inadequate, flawed or ineffectively applied and enforced. The UK health and safety regulations are robust and the regulatory regime governing oil and gas operations is world leading.
- HSE receives well notification information 21 days before work starts. Until the notification is received HSE cannot make a full appraisal of the design of the well and the programme of work and give assurance that the well operator is managing the health and safety risks appropriately including the risk of an unplanned release of fluids.

In respect of the further information the Executive has advised that their position remains unchanged.

Public Health England (PHE): Initially recommended that the Local Planning Authority (LPA) request and consider further information regarding sensitive receptors, atmospheric pollution, risks to surface waters and groundwater, environmental monitoring, radon, NORM, resources and waste, dust, noise, light and odour, accidents and incidents.

The applicant provided further information to address the issues raised by PNE. PHE has subsequently advised that the planning authority should confirm:

- That they are satisfied with the applicants assessment of site emissions and whether generator and engine emissions can be scoped out of the assessment due to their size and short operational periods.
- That emissions from activities and infrastructure at the site (e.g. generators, pumps and blenders) have been considered within the baseline methodology and the subsequent dispersion modelling assessment.
- The applicant has considered emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts.
- They are satisfied with the fugitive emissions assessment and are satisfied there will be mitigation measures in place to identify and minimise fugitive emissions if resulting air quality impacts are identified to be a concern once operational.
- The operator is happy to provide details on the baseline monitoring protocol in response to a planning condition.
- They are satisfied with details of monitoring locations, what is being monitored for, and the schedule for monitoring frequencies.
- They are satisfied with the proposed definition of significant variation for other determinants, regarding air emissions and surface water and ground water potential contaminants.
- They are satisfied with the applicant's proposal for drill cuttings coated with low toxicity oil based muds to not be covered.

PHE has also commented that whilst human health is not considered the primary receptor by the applicant that the public health section of the ES would have identified and considered routes by which emissions may lead to population exposure and consider them in the conceptual model. Potential public health impact should be considered during the assessment of probabilities.

No further comment was received in relation to the further information.

Environment Agency (EA): No objection in principle and recommends the following:

- A scheme to dispose of surface water between the drill pad and Carr Bridge Brook to be submitted to ensure the proposed development does not increase the risk of pollution to Carr Bridge Brook.
- Routine monitoring of on-site surface water quality and maintenance, and inspection of surface water drains, valves and interceptors to ensure correct and efficient operation.
- Surface water run-off retained on site during operations to be tankered away for off-site disposal and to not be discharged to the watercourse.

- To consider whether the Control of Pollution (Oil Storage) (England) Regulations 2001 apply. If not any facilities, above ground, for the storage of oils, fuels or chemicals to be sited on impervious bases and surrounded by impervious bund walls.

With regard to flood risk the EA confirmed that the proposed development is located in Flood Zone 1 which is defined as having a low probability of flooding in the National Planning Practice Guidance. The Agency has reviewed the Flood Risk Assessment submitted with the application and is satisfied that the development would not be at risk of flooding or increased flood risk off-site.

With regard to radon release during the flaring of gas, the Environment Agency confirmed that radon is exempt from their permitting by the Natural Gas Exemption Order 2002 and from regulation under the Environmental Permitting Regulations 2010. This is on the basis of its low risk, widespread use and that it was not amenable to regulation. Discharges of radon in natural gas, being flared or vented at gas sites is not subject to regulation under radioactive substances regulation (RSR).

The EA has reviewed the further information and made the following summarised comments:

- That an assessment of particulate matter has been included in the permit for the site and that an operator is required to include a baseline air quality study to be undertaken and ambient air quality monitoring.
- Emissions of noise and vibration are included in the determination of the Permits and are not considered to be an issue. Under the conditions of the Permit the operator is required to submit a specific noise and vibration management plan that will be monitored by the EA.

Highways Agency (HA): No objection in principle and advises as follows:

- If the traffic levels associated with the development exceed the levels in the Transport Assessment for the Strategic Road Network (SRN) the Highways Agency should be informed.

The cost of any mitigation to the highway asset needs to be covered by the instigator should damage occur due to project activities. No further comment was received in relation to the further information.

National Air Traffic Services (NATS): No objection. Initially objected on the basis that the proposed development would infringe on safeguarding criteria. Following further discussions with the applicant and a more in-depth analysis, it is now considered that the potential for impact on electronic infrastructure can be managed and there is no safeguarding objection.

In respect of the further information NATS confirmed their position remains unchanged.

Civil Aviation Authority (CAA): No objection. The proposed structures would not formally constitute aviation en-route obstructions, but recommend that the planning authorities check for any safeguarding issues with local aerodromes e.g. Blackpool Airport and Warton Aerodrome and it would be sensible to establish the related

viewpoints of local emergency services air support units. The CAA initially thought the application had no flaring which could cause a danger to overflying aircraft.

Following clarification that there would be routine flaring, the CAA confirmed that it is for the developer to be satisfied that the operations involving the flaring and/or venting of gas would not potentially endanger overflying aircraft or where there is a potential risk, to mitigate that level of risk. As the flare is to be contained in a flare stack it would seem reasonable for the developer to consider that flaring of gases would not be an issue to aircraft operation.

The assessment of whether gases released will be under pressure such as to cause turbulence affecting overflying aircraft also needs consideration. Any resultant turbulence, if generated, may dissipate within a few feet of the top of the stacks and the developer might consider that this represents no risk to the safety of aircraft.

No further comment was received in relation to the further information.

Blackpool Airport Ltd: Initially objected on the basis that the proposal conflicted with safeguarding requirements as it presented a hazard to the safe operation of aircraft in the vicinity of Blackpool Airport. The hazard related to the potential for bird strike and it was recommended that a bird strike assessment and mitigation plan was undertaken. Clarification regarding the exclusion of mitigation measures by the applicant from the wintering bird survey was also requested.

Following the submission of a bird strike assessment by the applicant and written confirmation from Natural England and the county council that the mitigation has been agreed by them, Blackpool Airport would withdraw their objection.

Blackpool Airport have requested that bird management requirements should be re-evaluated if compensatory habitats are provided at the site; if bird numbers and behaviour change and start to pose a risk to aircraft or if land management / ownership or working practices by the site owner/operator changes.

No further comment was received in relation to the further information.

National Grid Gas: No objection. National Grid has a Major Accident Hazard Pipeline in the vicinity, Peel Hill (Thornton) and associated service pipes. The Building Proximity Distance (BPD) to the pipeline is 14.5m minimum distance and when working in the vicinity of the pipeline National Grid Specification SSW22 applies. The developer should contact National Grid as soon as the planning stage has been completed to discuss the proposal and to liaise with National Grid regarding any monitoring, protection or diversion works that would be required for the works to be completed safely.

No further comment was received in relation to the further information.

United Utilities PLC (UU): No objection subject to the inclusion of a specific worded condition to protect assets in Preston New Road from HGV movements.

With regards to water supply to the site, UU has advised that the principal water demand would be during the hydraulic fracturing operations. During other times, water would be required to support the drilling operation, site cleaning and welfare operations. The water demand during hydraulic fracturing operations is anticipated to

be approximately 765m³ of water per day (a maximum of one hydraulic fracturing stage will be carried out in a single day). This water would be supplied from the United Utilities (UU) potable water network.

UU have confirmed that the 15" trunk main to the western corner of the site has the capacity to supply the site without restrictions (see Appendix 5 of the application ES for confirmation). UU have reported that the main has a history of bursts so installation of a pressure management valve (PMV) and flow meter would be required in order to reduce the burst risk. UU have also stated it may be possible to re-zone their network so the site would be the only user of the main.

To meet the current and future water quality needs of their customers across the Fylde, as well as fulfilling their obligations to their quality regulator (the DWI), a circa £13 million scheme to clean and upgrade the Lytham pipeline, which runs from Singleton into Blackpool is currently being planned. To allow for this work to take place a new 630mm water supply main section is being installed; the main will be completed in 2015. Consequently a new water supply point of connection has been identified on the new stretch of water main.

To facilitate the water supply needs of the temporary shale gas exploration scheme, and maintain the integrity of the new main an additional connection point is to be installed (at the Applicant's expense) while the main is being laid. A separate metered supply to each unit will be required at the Applicant's expense and all internal pipe work must comply with current Water Supply (Water Fittings) Regulations 1999.

No further comment was received in relation to the further information.

Police Emergency Planning: No objection. Lancashire Constabulary has advised that the development will not impact upon the Constabulary apart from potential protests.

No further comment was received in relation to the further information.

Natural England: No objection. An initial objection was made due to the need for further information to be supplied to the planning authority to check the likelihood for significant effects in accordance with the Habitats Regulations. Further information was required to address impacts on air quality, Special Protection Area (SPA) birds, land use and cumulative effects.

Following the receipt of additional information from the applicant, Natural England concluded that the specific issues they had raised had been addressed and therefore withdrew their objection.

Natural England also confirmed that points raised by Friends of the Earth relating to matters within their remit have been resolved with the applicant such that Natural England withdrew its objection.

In respect of the further information Natural England has advised that their position remains unchanged.

The Wildlife Trust: Object and request planning permission be refused. The reasons for objection relate primarily to the limitations of the ES and the application

with regard to compliance with the NPPF, LMWP and the British Standard, Biodiversity - Code of Practice for Planning and Development as follows:

- Contrary to NPPF regarding no net loss of biodiversity, no mitigation strategy and the proposal will contribute to a high carbon economy.
- Contrary to Policy DM2, the application only makes a small contribution to biodiversity and has no habitat creation and long term management of the site
- No signed disclosure regarding competence of individuals preparing the ES.
- Survey limitations are not provided for all surveys.
- No assessment of non-vascular plants and fungi.
- Bird surveys for one season, which may not reflect the true impact over time.
- Site search excludes special/wildflower roadside verges which could be adversely affected by changes to the road or increased traffic flow.
- No consideration of wildlife corridors, stepping stone habitats and/or any area identified by local partnerships/record centres for habitat restoration/creation.
- No reference to ecological networks for grassland, wetland and woodland.
- No identification of areas for biosecurity measures regarding control of Rhododendron and non-native species e.g. Himalayan Balsam
- The application does not include Ecological Constraints and Opportunities Plan (ECOP) cross referenced to other constrains.
- No contribution to wider biodiversity enhancement to help rebuild habitat networks, improve ecological resilience and adapt to climate change and deliver Lancashire Climate Change Strategy 2009-2020, England's Biodiversity Strategy, local BAP and Nature Improvement Area targets.
- Compensatory proposals need to occur before biodiversity losses occur
- No landscape or ecological management plan submitted.
- All environmental consents have not been approved/ licenced.
- The CEMP does not set out all necessary practical measures to ensure biodiversity features are protected during construction and operational activity.
- A legal agreement is required to safeguard management arrangements to protect biodiversity during construction and to conserve and enhance biodiversity through long term management, surveillance and monitoring.
- No commitment for a final statement of losses and gains arising.
- The applicant should consider enhancing hedges, grassland, ponds, ditches, field drains and woodland and creating species rich grassland, broadleaved woodland and species rich hedgerows and ponds.

The Wildlife Trust also recommends that the application should accord with the Are We Fit to Frack Guidelines, 2014 by the National Trust, The Wildlife Trust and Wetlands and Wildfowl Trust regarding regulation of the shale gas industry.

No further comment was received in relation to the further information.

The Campaign to Protect Rural England (CPRE): Initially raised no objection subject to conditions requiring mitigation measures for visual amenity, light pollution, noise pollution, transport impacts, hours of operation, water pollution, site abandonment, fracking, site survey methods utilising fibre optic technology, flowback fluid, flaring, liability, economic impact and greenhouse gases and the use of shale gas as a transitional energy source whilst energy demand is reduced and cleaner technologies are developed.

The CPRE has now changed their position and object to the proposal on the basis that there was no evidence that their suggested conditions were reflected in the recommendation.

Wildfowl & Wetlands Trust (WWT): Object on the basis that:

- Fracking poses a risk to wildlife.
- Significant weaknesses in the regulatory framework identified by Fit to Frack assessment of the regulatory framework.
- Regulatory framework does not safeguard against long term damage to nature and water quality at the local level leading to potentially significant financial costs for local communities.
- Fossil fuel contributing to climate change, a serious long term threat to the natural environment and to economic and social wellbeing.
- Is there evidence of no adverse impact on protected areas or protected species and that sites are not hydraulically linked to such areas.

No further comment was received in relation to the further information.

LCC Developer Support (Highways): No objection subject to the imposition of conditions requiring details for the construction of the access points to the site, the internal access road, traffic management plan, off site highway works, construction method statement, monitoring of highway conditions, provision of drainage and measures to prevent air and ground and surface water pollution it is considered that the development would be acceptable in terms of highway safety and capacity issues.

No further comment was received in relation to the 'further information'.

LCC Director of Public Health: Has undertaken a Health Impact Assessment (HIA) on the two drill sites and identified that the key risks to health and wellbeing of the population from the two proposed sites are a lack of public trust and confidence in the regulatory process and the industry, stress and anxiety from uncertainty about the industry that could lead to poor mental wellbeing; potential noise related health effects due to continuous drilling for at least five months for the initial borehole on each site and for three months for each of the subsequent three boreholes per site (14 months of continuous drilling), and potential health risks due to the presence of mining wastes generated as part of the drilling and hydraulic fracturing process being retained on site if adequate off site treatment facilities are not found.

A number of key recommendations to inform the planning process include:

1. Consider the need for further noise assessment, particularly on the proposed Roseacre Wood site and if necessary, require additional mitigation measures to reduce noise associated with the development of the sites and more particularly the drilling and hydraulic fracturing phases of the development and which could be controlled by conditions attached to any planning permission.
2. Establish with the applicant that liability and compensation arrangements are in place to cover any structural damages to properties that can be attributed to an unlikely event of induced seismicity.

3. Undertake an independent verification of the assessment of air quality, transport, waste management and induced seismicity prior to determining the planning applications.
4. Seek agreement with the Applicant to establish an independent comprehensive baseline and on-going long term monitoring of environmental and health conditions prior to any activity on the sites.

The Director of Public Health should be informed of the results of the measurements and any breaches to the planning condition or environmental permit.

6. Consider the need to seek further clarification from the Applicant that the cumulative impacts of the operations from the flare, generators, vehicles and drilling will not exceed the national air quality objective thresholds, particularly for PM 10, 24 hour mean levels.
7. As part of either the planning or permitting process, the Applicant should be required to submit regular data on the ambient air quality on site measuring all the common air pollutants relevant to the activity and report them regularly. PM 10 and PM2.5 should be reported separately.
8. The Roseacre Wood site is within 55m of a National Grid gas transmission pipeline. Interconnections into national transmission pipelines are proposed at both sites. Advice should be sought and an assessment undertaken as to whether the nearby gas transmission pipelines are considered to be a major hazard.
9. Any extended flow testing provided for by any planning permissions should be aligned with the permits to be issued by the Environment Agency.
10. An assessment of light pollution as part of the site operations should be carried out, and if there are likely to be significant impacts associated with light pollution from the sites that cannot be mitigated or controlled, the Applicant should be requested to consider the opportunity to offer to fit blackout blinds to those homes most likely to be affected.
11. Further clarification or new information on the occurrence and magnitude of equipment likely to be contaminated with radioactive waste and how such waste would be managed on the site and disposed of should be sought.
12. Should planning permission be granted, it should be a pre requisite that no activity can start until the onsite and offsite waste treatment capacity is defined.
13. Further clarification should be sought that any specific risks due to using the MoD site for accessing the Roseacre Wood site have been addressed before any planning permission is granted.
14. A full assessment of the impacts of additional traffic associated with the proposals on road safety should be carried out and appropriate traffic management options considered to address the public concerns, particularly in respect of the Roseacre Wood site.
15. Should planning permission be granted, provision should be made with the Applicant to maintain road safety, particularly on the access routes to Roseacre Wood site and road safety and any related incidents on the access to both the sites should be monitored.
16. In the event planning permissions are granted, any breach of planning conditions should be reported to the Director of Public Health so that necessary steps can be taken in protecting and improving the health of local communities from issues arising due to the alleged or identified breaches of planning control.

Indicative framework for long term monitoring of environmental and health Conditions:

1. Context

It is understood that a range of data will be collected by the operator and reported to the regulatory authorities, particularly the EA. What this will constitute is not available to LCC's public health department until the environment permit, planning condition and environmental operating standards are agreed. This document is written with that gap in knowledge. Following the Applicant's surrender of the permit to the EA (who must be satisfied that environmental conditions are acceptable and will remain so before accepting the surrender), current practice suggests there will not be a requirement for long term monitoring of the environment in and around the restored sites of former wells. Establishing a shale gas monitoring unit in Lancashire as an independent source of reliable information will help with the understanding of any environment and health impacts and the communication of risks to the local communities. It will also support the development of future policy and practice of shale gas extraction.

2. Aim

To establish an independent, reliable, single source of local information on shale gas exploration in Lancashire.

2.1 Objectives

- To develop a framework to establish a baseline and ongoing monitoring of environmental and health conditions
- To support risk communication and reassurance to local communities on the safety and impacts of shale gas activities in Lancashire.
- The governance and management of the shale gas observatory should be determined in consultation with various stakeholders including the local communities, the industry, and the regulatory agencies.

3. The framework for data collection

It is expected that most of the data will be collected under the existing regulatory regime. Hence, the focus should be collating the data in one place with independent verification, analysis and communication of risks to the public in a transparent, reliable and proportionate manner.

Both qualitative and quantitative methods of data collections should be used. It is anticipated that the data collection will start prior to any activities beginning if the applications are approved. It will mainly focus on the geographical area affected by the two planning applications. This is currently understood to be approximately a 2 kilometres radius from the proposed location of the well pads.

The time period for long term monitoring should be at least 30 years post abandonment or until such time there is national guidance on long term monitoring. The suggested 30 year time period is based on the long term monitoring of landfill gas migration.

3.1 Data collection and analysis (an indicative list)

- Profiling of drill cuttings, fracturing fluids to identify substances hazardous to human health including NORM.
- Information on decontamination of equipment.
- Characterisation of the extent of fracture propagation and the permeability of layers above and beyond the faults
- Characterisation of combustion gases at the flare, particularly the levels of hydrocarbons, radon, methane, volatile organic compounds and any other substances deemed hazardous to human health
- Levels of fugitive emissions at well pads, on potential pathways and at receptor households.
- Ground water monitoring of methane.
- Measuring long term well integrity.
- Particulate Matter at source and confirmation of the modelling findings for receptors in the ES.
- Levels of noise at source and receptors.
- Information on any existing private water supplies that aren't covered by abstraction license within 2 km zone.
- Sampling of ground/food chain.
- Information on local climate within the 2 km zone to identify potential hotspots.
- Safety profile of transport routes and modelling to minimise road traffic accidents
- Safety profile of waste management sites.
- Household survey of human health and wellbeing, and sampling of environmental conditions within the 2km zone. The sampling to be based on modelling from source data.
- Survey of any other sensitive receptors in the vicinity of the two sites.
- Analysis of routinely collected data on health and health care utilisation.
- Analysis of occupational health surveillance data collected by the operator.

No further comment was received in relation to the further information.

LCC Emergency Planning: No objection. The application does not impinge on any COMASH or REPPIR sites but does pass through an area through which a major hazard pipeline passes. This would be a matter for National Grid.

No further comment was received in relation to the further information.

LCC Highway Services (Lighting): No objection. The design generally complies with required standards with the exception of the predicted sky glow which marginally exceeds the permitted standard, but it is not considered that this would cause any issues to the surrounding area or to the highway and its users

No further comment was received in relation to the further information.

LCC Specialist Advisory Services:

Landscape: Focusing on a 2.0km radius from the centre of the application site, the elements of the development which have the most potential for creating significant landscape and visual impacts are drilling, hydraulic fracturing and flow testing

operations which involve the use of a drilling rig (up to 53m high), fracturing rig, well services rig and flare stacks.

It is recommended that additional photomontages for viewpoints 3, 6 and 10 to a prescribed methodology are submitted as the submitted images to do reflect the true scale of the proposed development, with the rig appearing approximately 3x smaller than it will in reality.

The site falls within the County Council's Coastal Plain landscape character type and The Fylde landscape character area, which are characterised by rural farmland, hedgerows, shelter belts and field ponds, slightly undulating topography, long views across the landscape and a strong sense of openness. The application site has these landscape characteristics along with some significant landscape detractors including electricity pylons, the M55 and the A583.

A detailed assessment of the potential impacts and significance on the landscape and receptors, taking account of the development site and area landscape characteristics has been undertaken with the following summarised observations:

- Major significance on views from The Gables and Plumpton Hall.
- Moderate to major significance on the local landscape character and views from Preston New Road, Staining Wood Farm, Plumpton Lane and Moss House Lane.
- Minor significance on landscape fabric and the views from Westby Road and Great Plumpton.
- Negligible to minor significance on the character type and area, landscape amenity and the views from Little Plumpton, Peel Road, Ballam Road and Westby.
- Negligible significance on the landscape value of the site and wider landscape.
- No significant cumulative effects with the proposals at Roseacre.

The assessment of the proposal has also taken account of the effects of time, with regard to the duration of the landscape effects, and has also taken account of mitigation proposals which will reduce the impact of low level site structures.

The proposed development would have some temporary but reversible localised landscape and visual effects of moderate-major significance. However, these are not considered to significantly affect the overall character of the Coastal Plain Landscape Character Type or The Fylde Landscape Character Area. In addition, the likely effects of the development proposals on the landscape's value and fabric would not be significant and, there would be no significant cumulative effects. For these reasons, the overall temporary effects of the proposals are deemed to be acceptable in landscape terms.

The applicant's options for mitigating the most significant localised effects are limited due to the height of the drill well (potentially 53m), characteristics of the receiving landscape and the 3 year operations period which does not leave enough 'growing time' for planting to have any significant impact. So, whilst there is much about the proposals which could be deemed acceptable in landscape terms, especially in the context of the wider landscape, the applicant needs to address the likely significant localised effects to ensure that overall, this form of temporary industrial development

is successfully assimilated into the rural landscape. The most appropriate way of achieving this would be through implementation of the additional mitigation measures outlined above.

It is concluded that significant localised landscape and visual effects are unavoidable although there is scope to further mitigate the likely effects by reducing the height of the drilling rig to a maximum of 35m; finish the drilling and fracturing rigs in a more suitable colour than red/white as proposed and to finish the various cabins and other temporary buildings in a more appropriate colour than blue as proposed.

With regard to the further information an assessment of the likely landscape and visual effects of the proposed noise mitigation measures has been carried out.

The applicant has reduced the drilling rigs height from a maximum of 53m down to a maximum of 35m and selected a more appropriate colour scheme for the surface finish of some of the development's temporary structures, i.e. the solid acoustic barrier around the well pad and visible part of the rig. Collectively, these changes would have a limited beneficial mitigating effect on views of the proposed drilling, hydraulic fracturing and flow testing operations. The drilling rig would be less dominant in views, be more in keeping with the scale of existing landscape features and appear less conspicuous when viewed against the skyline, especially on cloudy days. It would still be appropriate for a consistent surface finish colour scheme for all of the various cabins and temporary buildings given the sensitivity of the landscape and concerns expressed by the local community, to 'camouflage' the proposed temporary structures as much as possible. The proposals as amended would have no significant impact on public rights of way in the area which are situated away from the site and views from them are heavily filtered by existing topography and vegetation. Levels of landscape tranquillity would not significantly alter due to the reduction in noise levels.

The proposed changes identified would be beneficial in landscape terms. The landscape and visual effects would likely be reduced – just – from a previously predicted **moderate-major** level of significance to a more **moderate** level which is lower but still significant in planning terms. The proposed changes would have no implications on previous conclusions that the proposed development would not significantly affect the overall character of the Coastal Plain Landscape Character Type or The Fylde Landscape Character Area.

The temporary reversible effects of the revised proposals are considered to be acceptable in landscape terms.

Ecology: No objection. The application area appears to be of relatively limited biodiversity value, comprising improved agricultural land with few features of any significant biodiversity value.

The development will impact on features (habitats) of biodiversity value including hedgerows and on the habitat of protected and priority species (including bats, birds, amphibians and mammals).

Mitigation and compensation need to be secured as part of any planning approval for the site, including mitigation measures for wintering birds and great crested newts, a Biodiversity Mitigation Strategy (amphibians, bats, nesting and wintering birds,

badgers, reptiles, water voles, brown hare) and a revised ecological Mitigation Strategy (landscaping, habitat creation and enhancement)

A requirement for the submission for further information to establish the presence or absence of great crested newts in water body pond 10 was also requested prior to determination of the proposal. The applicant subsequently submitted survey information that provided no evidence of great crested newts being detected within the zone of influence of the proposed development and no impacts on the species or its habitat. Therefore no mitigation or compensation for impacts on great crested newts is required by planning condition.

In respect of the further information the position remains unchanged.

Archaeology: No objection. The Archaeology and Cultural Heritage chapter of the ES has been undertaken in line with the requirements of the County Archaeology Service (LCAS). LCAS agrees with the assessment that the site has a low potential to contain previously unknown archaeological finds or features.

The proposed mitigation measures are considered to be appropriate. LCAS recommend therefore that should the application be approved a condition is attached that development should not take place until the implementation of a programme of archaeological work is secured.

In respect of the further information the position remains unchanged.

Representations: (Appendix 2)

The application, Environmental Statement and supporting documentation to the application have been advertised in the local press, site notices posted at various points on and around the site and neighbouring properties considered to be most affected individually notified by letter. The 'further information' submitted by the applicant was similarly advertised in the press. Copies of all the documents were made available for inspection on the County Council's web site and hard copies were made available at the County Council's offices, the offices of Fylde Borough Council, Kirkham Library; St Anne's Library; Lytham Library; and Ansdell Library.

Representations have been received from a number of groups and individuals. The following is a summary of representations received from interest groups and a list of the main issues raised; a summary of the presentations received in advance of the January meeting, of all the representations received in respect of the applications as initially submitted and those received in respect of the further information are set out in Appendix 2.

Friends of the Earth (FOE): Object to the proposed development for the following summarised reasons and which are set out more fully in the appendix:

FOE, on behalf of Preston New Road Action Group, initially expressed concerns regarding the consultation period of 21 days for consideration of the Environmental Statement accompanying the planning application. LCC took account of these concerns and extended the formal consultation period to 12 weeks.

FOE submitted an objection to the proposal with regard to the precautionary principle and the Water Framework Directive; inconsistency within national and local planning

policy, inconsistency with government policy; evidence of adverse environmental impacts and inadequate consideration of adverse socio-economic and public health impacts. Further representations were made to the further information submitted by the applicant and which was accompanied by a consultant's report on waste.

In relation to the further information FOE has advised that their position remains unchanged and have made further comments in relation to cumulative impacts, baseline monitoring, water impacts and noise.

Preston New Road Action Group

Representations received on behalf of Preston New Road Action Group object to the proposal for reasons under the following headings the summarised reasons and which are set out more fully in the appendix:

- Proximity to residents
- Impact on ecology
- Pollution risk
- Waste Disposal
- Traffic
- Watercourses
- Landscape
- Induced Seismic Activity
- Development and Regulation
- Health Impacts

Further representations on the further information have been made in respect of the following:

- Noise
- Landscape
- Hydrogeology
- Well Integrity

Objections:

Up to the end of May 2015 a total of 18,022 (excluding duplicates) representations objecting to the proposal had been received. Representations have continued to be received many in a variety of template forms, the final number of which will be reported when the application is presented for determination. Of those received by the end of May 1062 were duplicate representations.

The reasons for objecting to the proposal are summarised in Appendix 2 under the following headings:

- Need for the Development
- Climate Change
- Energy Alternatives
- Environmental Impact
- Exploration or Production

- Regulation
- Safety
- Geology / Seismicity
- Air Pollution
- Noise Pollution
- Light Pollution
- Soil and Groundwater Contamination
- Waste Disposal
- Water Resource Sustainability
- Landscape Impact
- Ecology
- Economy
- Traffic
- Health and Wellbeing
- Community
- Property
- Damage and Compensation
- Abandonment
- Applicant / Application
- Government
- Lancashire County Council / Decision making

Petitions

The following petitions objecting to the proposed site and fracking in general have been received from the following:

- Parents, family and friends of Weeton St Michael C of E school - 241 signatories.
- Defend Lytham - 924 signatories.
- FOE - 23624 names (not 75,000 as stated on the petition) with no signatures or addresses calling for the County Council to reject hydraulic fracturing.
- FOE - 7548 names with no signatures or addresses objecting to both applications.
- Roseacre, Wharles and Treales - 192

Support

217 letters have been received in support of the proposal.

A letter has been received from the North West Energy Task Force signed by 120 business leaders urging support for the application.

The reasons for supporting the proposal are summarised as follows and are set out more fully in Appendix 2:

- Energy Security – need, supply and pricing
- Economic Benefits
- Minimal Environmental Risks
- Robust Regulatory Framework

Advice

This section of the report and associated appendices have been updated in parts to address the further information received and assess the consultation responses and representations received in relation to such. The following sections of the report and appendices have **not** changed:

- Policy
- Need for the development
- Archaeology and Cultural Heritage (Appendix 4)
- Community and Socio Economics (Appendix 6)
- Ecology (Appendix 7)
- Induced Seismicity (Appendix 9)
- Landuse (Appendix 10)
- Lighting (Appendix 12))
- Transport (Appendix 15)
- Water Resources (Appendix 16)
- Overview of cumulative and in combination effects

Planning permission is sought for the construction and operation of a site for drilling up to four exploration wells, hydraulic fracturing of the wells, testing for hydrocarbons, abandonment of the wells and restoration, including provision of an access road and access onto the highway, security fencing, lighting and other uses ancillary to the exploration activities, including the construction of a pipeline and a connection to the gas grid network and associated infrastructure to land to the north of Preston New Road, Little Plumpton. A supporting application for the installation of a monitoring array of 80 boreholes for seismic and water quality within the surrounding area has also been submitted (ref LCC/2014/0097).

The applications are supported by a Planning Statement (PS), Supporting Documents, an Environmental Statement (ES) and a Non-Technical Summary (NTS). The PS includes a Sustainability Appraisal and the Supporting Documents include a Flood Risk Assessment, Utilities Statement and a Statement of Community Involvement. Further information was submitted in response to consultee responses and comments made by other bodies, groups and individuals.

Section 38 (6) of the Planning and Compulsory Purchase Act 2004 requires planning applications to be determined in accordance with the Development Plan, unless material considerations indicate otherwise. In considering the issues that arise from the proposed development, it is necessary to take into consideration the relevant policies of the Development Plan and the planning history of the site and all other material planning considerations. Government policy is a material consideration that should be given appropriate weight in the decision making process.

Government policy supports the exploration, testing (appraisal) and production of economic onshore hydrocarbon reserves. This application relates to the first two Phases; exploration and testing (appraisal). The site would then be restored unless the appraisal stage indicated that exploitation would be viable. If that were to be the case, further planning permission for any exploitation phase would be required.

Policy

General Government Policy on Energy resources

One of the primary roles of National Government is to manage and regulate the supply of energy resources to ensure that the UK has access to secure, clean affordable energy supplies whilst also aiming to meet international obligations on climate change including reduction in greenhouse gas emissions. A number of pieces of legislation and policy statements have been made by recent Governments in relation to energy including the following:

In 2007 the Government published a White Paper on energy (Energy – Meeting the Challenge) which set out the Government's domestic and international strategy for responding to the two main challenges of meeting targets for cutting greenhouse gases to meet climate change objectives and to ensure the availability of secure, clean and affordable energy as imports replace declining North Sea production. The White Paper sought to respond to these challenges in a way that was consistent with energy policy goals including cutting CO² emissions, maintaining reliability of energy supplies, promoting competitive markets and ensuring that every home is adequately and affordably heated,

The Climate Change Act Of 2008 also makes it a duty of the Secretary of State to ensure that levels of the main greenhouse gases in 2050 emitted by UK households, industry, transport and the energy generation sector are at least 80% lower than 1990 levels.

In 2009, the Government published 'The UK Low Carbon Transition Plan' which is a national strategy for climate and energy including how energy generation will be gradually transformed to a system based on renewables in order to meet climate change objectives including those obligations in the Climate Change Act. The document identifies that there will be a continuing need for energy generation from fossil fuel sources including gas as part of this transformation provided that such generation is associated with carbon capture technologies in order to meet climate change objectives.

More recently (2011), the Government has also published a National Policy Statement for Energy against which proposals for energy infrastructure brought forward under the 2008 Planning Act will be assessed. Although, this application is for exploration for hydrocarbons and not for nationally significant energy infrastructure, there are a number of themes within the policy document that are relevant with regards to the present Government's views on the likely future need for gas as a fuel for energy generation. These general themes are as follows:-

- The need to meet legally binding targets to cut greenhouse emissions by at least 80% by 2050 compared to 1990 levels which will require major changes in the way that energy is generated and used by individuals, industry and the public sector.
- The Government considers that it is critical that the UK continues to have secure and reliable supplies of energy resources to be achieved by ensuring the existence of reliable supply chains (for example fuel for power stations) to meet demand as it arises

- A diverse mix of technologies and fuels including the need to source fuels from a wide range of locations.
- The need to address issues raised by increased imports of oil and gas as North Sea reserves decline in an environment where energy demand is rising and supply is increasingly politicised.
- The requirement to make substantial and timely investment in new infrastructure over the next two decades including in new fossil fuel generating capacity during the transition to a low carbon economy.

In December 2012, the Government also published a Gas Generation Strategy. The report noted that a third of UK energy demand is met by gas and that as coal use declines for use in power generation, gas will have an important role to play in filling the gap alongside renewable and nuclear generation thereby helping to reduce carbon emissions. The Government's forecast is that gas use in 2030 will be at similar levels to 2012 and that gas will still be needed for many years into the future.

The Strategy noted that the strong role of gas in energy generation has been supported by a secure supply of fuel and that the global outlook for gas supply is good which has been recently enhanced by developments in unconventional gas extraction. The Strategy notes that an important component of Government energy security policy is to ensure that the UK is not over dependant on any individual fuel source and that over reliance on gas, or any single energy resource, could put the UK at more risk if there were any disruption to supply. Such risks are likely to become greater for gas as the UK become dependent upon imports as domestic production declines. The strategy notes the developments in unconventional (shale) gas in the US, highlights the favourable geology in some parts of the UK and provides a commitment to provide various policy and fiscal incentives to encourage exploration for shale gas in the UK as a possible means to provide additional security of supply for gas.

To summarise, Government energy policy is therefore that there will be a continuing need for gas particularly for energy generation and that gas will have an important role to play in terms of providing security of supply and enabling a transition to low carbon means of generation. The Government has identified the security issues that may arise from increasing amounts of gas having to be imported from outside the UK and therefore has sought to encourage the exploration of domestic shale gas resources in order to establish the degree to which they could enhance diversity and security of supply.

National Planning Policy

National Planning Policy Framework (NPPF): The NPPF provides a broad framework for dealing with planning applications for mineral development including for energy resources.

The NPPF states that *'minerals are essential to support sustainable economic growth and our quality of life. It is therefore important that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs.'* The NPPF therefore requires that in determining planning applications, that great weight is given to the benefits of mineral extraction, including to the economy but that proposals should also be considered against a range of criteria including

impacts on human health, impacts of noise at nearby properties and effects on the natural and historic environment.

When determining planning applications for on shore oil and gas development, including unconventional hydrocarbons, the NPPF also requires mineral planning authorities to clearly distinguish between the three phases of development (exploration, appraisal and production). The current application is for an exploration site and therefore the application should be considered on that basis.

There are a number of other sections of the NPPF that are relevant to this application in terms of general planning issues including:-

Paragraphs 11-14	Requirement for Sustainable Development
Paragraph 17	Core Planning Principles
Paragraphs 56-66	Requirement for Good Design
Paragraph 100	Flood Risk
Paragraph 103	Requirement for Flood Risk Sequential Test
Paragraph 109	Conserving and Enhancing the Natural Environment
Paragraph 118-125	Conserve and Enhance Biodiversity

National Planning Policy Guidance (NPPG)

The National Planning Practice Guidance includes policy on hydrocarbon extraction including onshore oil and gas. The guidance is intended to be read alongside the NPPF and other planning guidance. The guidance is intended to cover unconventional hydrocarbons (such as shale gas). The guidance states that unconventional hydrocarbons are emerging as a form of energy supply and that there is a pressing need undertake exploratory drilling to assess whether or not there are sufficient recoverable reserves to allow full scale production on an economically viable scale. The guidance also includes information on the phases of hydrocarbon exploration, the planning application process and the issues raised by such developments including those that are specific to unconventional gas reserves.

In summary, National Planning Policy and Guidance in relation to this application is that proposals which meet the definition of sustainable development and which comply with the policies of the development plan should be approved without delay. In determining individual applications, the economic benefits of mineral extraction are important considerations but must be balanced against local environmental impacts. In terms of unconventional gas proposals, the Government wishes to understand the likely contribution that such resources might make to gas supply. As with any hydrocarbon resources, the information gathered by techniques such as seismic surveys has limitations and exploration wells must be drilled to allow an accurate assessment of the size and recoverability of the resource. The Government wishes to encourage the drilling of such exploration wells where they are environmentally acceptable as a means to more accurately establish the size of UK shale gas resources including the contribution they may make towards energy self-sufficiency.

Local Development Plan Policy

The Development Plan for the site is made up of the Joint Lancashire Minerals and Waste Development Framework Core Strategy (LMWDF), the Joint Lancashire

Minerals and Waste Local Plan – Site Allocation and Development Management Policies – Part One (LMWLP) and the Fylde Borough Local Plan.

Joint Lancashire Minerals and Waste Development Framework Core Strategy Development Plan documents (LMWDF)

Policy CS1 - Safeguarding Lancashire's Mineral Resources – this policy requires that minerals will only be extracted where they meet a proven need for materials with those particular specifications

Policy CS5 - Achieving Sustainable Minerals Production – the policy outlines a number of criteria against which proposals will be considered to ensure that natural resources (water, air, soil and biodiversity), the historic and visual importance of landscapes, flooding and the amenity, health and wellbeing of the population are protected from harm and appropriately enhanced.

Joint Lancashire Minerals and Waste Local Plan – Site Allocation and Development Management Policies – Part One (LMWLP)

Policy NPPF 1 - Presumption in favour of sustainable development = the policy reiterates the position in the NPPF that planning applications which accord with the policies in the local plan will be approved without delay and that where there are no relevant policies, the County Council will grant planning permission unless material considerations, including policy in the NPPF, indicate otherwise .

Policy DM2 - Development Management – the policy states that proposals for minerals operations will be supported where it can be demonstrated that all material social, economic or environmental impacts that would cause demonstrable harm can be eliminated or reduced to acceptable levels.

The policy also states that proposals will be supported where it can be demonstrated to the satisfaction of the mineral planning authority that the proposals, where appropriate, will make a positive contribution towards the local and wider economy, historic environment, biodiversity and landscape character, residential amenity, reduction in carbon emissions and reduction in length and number of journey's made.

The County Council is also preparing a 'Supplementary Planning Document' (SPD) on oil and gas exploration, production and distribution. The purpose of the SPD is to provide interpretation of how the existing policies in the Minerals and Waste Core Strategy and Local Plan are intended to operate, to give guidance on the application process and to provide information on some of the characteristics of the hydrocarbon industry. The draft was published for consultation on 5th January 2015.

Fylde Borough Local Plan

The Fylde Borough Local Plan contains a number of policies for the general control of development in the Fylde area and was adopted in 2005. The Borough Council are producing a replacement Local Plan. However this is at an early stage of preparation and therefore carries limited weight at present. Due to the age of the existing local plan, it may be that some policies of the existing local plan carry limited weight, particularly where they are not consistent with the NPPF. However the

policies referred to in the report are considered to still retain weight and are consistent with the NPPF.

At a strategic level, the site is defined as a countryside area in the Local Plan and is therefore subject to Policy SP2. Policy SP2 states that development in such areas will not be permitted except where proposals are essentially required for the purposes of agriculture, horticulture or forestry or other use appropriate to a rural area. An exploration site for hydrocarbons is an industrial form of development, albeit temporary, which does not fall within the above categories.

However, minerals can only be worked where they are found. Although the Bowland Shale occurs beneath most of the Fylde area and therefore there may be some flexibility as to where an exploration site can be located, much of the area outside the existing settlements within Fylde Borough is designated as countryside. Due to the need to retain a separation between exploration sites and settlements, exploration in countryside locations is therefore almost inevitable. For these reasons, whilst the development is considered contrary to Policy SP2, given minerals can only be worked where they occur and can usually only be worked in undeveloped areas, there is an inevitability that they will fall within countryside areas. Whilst the intentions of the policy are clear, in circumstances such as these, it must be afforded limited weight as otherwise all mineral development would have to be found unacceptable.

There are also a number of other local plan policies dealing with environmental impacts against which the proposal has been assessed. These policies are:-

Policy EP11	Building Design and Landscape Character
Policy EP12	Conservation of Trees and Woodland
Policy EP15	European nature conservation sites
Policy EP16	National nature reserves
Policy EP17	Biological heritage sites
Policy EP23	Pollution of Surface Water
Policy EP24	Pollution of Ground Water
Policy EP26	Air Pollution
Policy EP27	Noise Pollution
Policy EP28	Light Pollution

Assessment

The application and supporting information and further information has been assessed against the national guidance, the national policies and those relevant policies of the local development plan under the following sections relative to those set out in the ES. In view of the nature and complexity of some of the issues raised where appropriate these have been set out in supporting appendices including the nature of the proposal relative to the subject matter, the proposed mitigation if required, a summary of representations received and an assessment of such. A summary of the issues with reference to their respective appendices where appropriate are reported as follows.

Scheme alternatives

Schedule 4, Part 1 (2) of the EIA Regulations requires the ES to provide “*an outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects*”.

Unlike other types of mineral development where there are very narrowly defined locations for development, exploration sites could potentially be located at a variety of sites within the applicant's exploration licence area. The applicant has undertaken a systematic process to select the preferred sites for this stage of exploration.

The purpose of the exploration proposals is to establish the potential commercial shale gas reserves in Lancashire and provide a clearer understanding of the total amount of gas in place and the volume of commercially recoverable gas. The exploration of gas is supported by the Government and particularly DECCs UK Gas Generation Strategy in respect of shale gas.

The applicant is proposing 4 wells at each of the proposed sites (Preston New Road and Roseacre Wood) which would enable different strata to be targeted from one site. The sites have been selected based on geological, environmental, community, land ownership and other technical factors in a staged manner.

The first stage involved a detailed understanding of the geological conditions following the 3D geophysical survey that was carried out. This identified areas of relatively shallow flat laying shale which directed the choice of site to avoid hydraulically fracturing near regional faults and which together with the employment of a 'traffic lights system' of monitoring would reduce the risk of inducing a felt seismic event.

The second stage involved the identification of Tier 1 environmental constraints, namely:

- Existing and proposed European and national designations (for example Special Protection Areas, Sites of Special Scientific Interest).
- Nationally designated heritage assets including: listed buildings, Scheduled Monuments,
- Registered Parks and Gardens, Registered Battlefields and World Heritage Sites.
- Groundwater Source Protection Zone 1.
- Flood Risk – avoiding flood risk zone 3b.

The second stage involved the identification of Tier 2 environmental constraints, namely:

Connections:

- Highway routes and access - A review of the existing road network and access arrangements was undertaken to identify locations where it would be suitable to use an existing access or create a new access to an exploration site.

- Utilities - Areas were identified where there is potential to connect to existing utilities networks (principally potable water supply and gas).

Environmental Constraints:

- Cultural heritage - All heritage assets identified via the historic environmental record were mapped and reviewed.
- Landscape character - Landscape character areas were mapped and considered in regard to the location of exploration well sites and the County's Landscape Strategy.
- Visual impact - A broad zone was used to establish the area in which the exploration well sites may be visible.
- Protected species - Data was collected from site walkovers, surveys and existing ecological records were reviewed.
- Non-designated sites/valuable habitat - Non-designated sites and valuable habitats were defined and reviewed for each site
- Agricultural land quality - Information on agricultural land classifications (i.e. 1, 2, 3a and 3b) was reviewed.
- Proximity to housing and other sensitive uses - Residential properties and other sensitive uses were considered and the distance from these uses was taken into account.
- Light pollution - The potential for light pollution was considered for each zone taking into account the topography of the site, existing barriers and sensitive receptors.
- Noise - A more detailed consideration of noise was undertaken for each zone, taking into account existing noise levels, potential noise barriers and distance from residential properties and sensitive receptors.
- Air quality - The potential for air quality impacts was considered taking into account air quality management designations and sensitive receptors.
- Water resources, flood risk and drainage - Proximity to watercourses, wetlands and ponds, and the potential for future development of groundwater resources was considered. Flood risk issues and drainage requirements were also considered.

Planning Constraints

- Local planning policy - The Development Plan allocations and planning designations were identified.
- Land Ownership Issues
- Potential to secure a lease from the landowner - The likelihood of using the land for the purpose of an exploratory well was determined based on discussions between Cuadrilla and the land owners.
- The existing sites that are within the control of the applicant and for which planning permission has previously been granted at Grange Hill, Preese Hall, Annas Road and Becconsall were also considered. These were dismissed due to them not having the most suitable geological characteristics (Grange Road), abandonment (Preese Hall, Annas Road) or not falling within the 3D geophysical survey (Becconsall).

The assessment of all the above constraints has led to the proposed site being chosen.

Inevitably, notwithstanding the site may be considered to be the preferred site by the applicant it would still generate potential impacts, most particularly on the nearest residential properties. It has been suggested that a site could have been located in a more industrial location particularly with the opportunity to directionally drill at depth and which would not have generated the same type of impacts. However, such locations may not be as attractive in terms of targeting the geological horizons with most potential. DECC is of the view that in principle hydraulic fracturing through a fault should be avoided. The applicant has stated that they plan to avoid all detectable faults (whether local or regional), which is the correct approach. The applicant's 3D data will be scrutinised through the review of the HFPs to ensure that the full extent of the stimulated rock volume preserves a safe distance from any detectable fault to prevent fracturing fluids entering a fault and transmitted along it. There would be greater risk of drilling through faults if directional drilling were to be undertaken from more industrial locations further away from the preferred location identified specifically from the 3D survey. Further, if the impacts of the proposed development can be found or made acceptable then it could be argued that the preferred site could be found acceptable in its own right.

The application must of course be considered on its merits and the following is an assessment of the need for the development and the potential impacts and proposed mitigation.

Need for the development

The Government has made it clear that there is a need to reduce carbon emissions and to ensure energy security and that while renewable energy must form an increasing part of the national energy picture, oil and gas remain key elements of the energy system for years to come. The Government is committed to maximising indigenous resources, subject to safety and environmental considerations. It is considered that in principle the proposal accords with the approach set in national guidance by investing in energy infrastructure to establish whether indigenous oil and gas reserves are available and worth exploiting.

The NPPF, for the purposes of oil and gas exploration notes that '*Minerals are essential to support sustainable economic growth and our quality of life*' and that '*...minerals are a finite natural resource, and can only be worked where they are found...*' (NPPF paragraph 142). Paragraph 144 requires that in determining planning applications local planning authorities '*give great weight to the benefits of mineral extraction, including to the economy*', though this must be balanced against the weight given to environmental impacts of a development.

Paragraph 124 PPG: Minerals advises that nationally, energy should come from a variety of sources, including oil and gas, and mineral planning authorities should take account of government policy including that relating to oil and gas.

Paragraph 147 of the NPPF states that minerals planning authorities should '*when planning for on-shore oil and gas development ... address constraints on production and processing within areas that are licensed for oil and gas exploration or production.*' This makes it clear that any consideration of constraints should be limited to sites which are covered by a Petroleum Exploration and Development Licence (PEDL). As operators can only explore within the area they hold a PEDL for, it is considered reasonable to limit consideration of alternative sites to a single PEDL

area, particularly as a key constraint for oil/gas exploration would be holding the PEDL licence.

At the local level, there are no specific policies relating to oil and gas. Policy CS1 of the Joint Lancashire Minerals and Waste Development Framework Core Strategy Development Plan documents (LMWDF) seeks to safeguard Lancashire's mineral resources and requires that minerals are only extracted where they meet a proven need for materials with those particular specifications. Policy CS5 - Achieving Sustainable Minerals Production outlines a number of criteria against which proposals will be considered to ensure that natural resources (water, air, soil and biodiversity), the historic and visual importance of landscapes, flooding and the amenity, health and wellbeing of the population are protected from harm and appropriately enhanced.

Policy NPPF 1 of the Joint Lancashire Minerals and Waste Local Plan – Site Allocation and Development Management Policies – Part One (LMWLP) reiterates the position in the NPPF that planning applications which accord with the policies in the local plan will be approved without delay and that where there are no relevant policies, the County Council will grant planning permission unless material considerations, including policy in the NPPF, indicate otherwise. Policy DM2 states that proposals for minerals operations will be supported where it can be demonstrated that all material social, economic or environmental impacts that would cause demonstrable harm can be eliminated or reduced to acceptable levels.

The application site is within PEDL 165 and EXL 269 licence boundaries. The area covered by the PEDL encompasses the major settlements of Preston, Fleetwood, Blackpool, Lytham, Leyland, Chorley and Southport between which the area is generally rural with scattered, small settlements and, therefore, any oil/gas site tapping into this reserve is likely to be within the countryside.

It is considered that in principle the proposal accords with the approach set in local policy that mineral operations will be supported where it can be demonstrated that all material social, economic or environmental impacts that would cause demonstrable harm can be eliminated or reduced to acceptable levels. The following is an assessment of whether the applicant has demonstrated such.

Air Quality (Appendix 3)

The County Council commissioned Lancashire Scientific Services and Ricardo-AEA to assess air quality impacts. The EA has undertaken an extensive assessment of air quality impacts.

The project would generate some emissions to air. But providing the operational practices are adhered to and regulated by the EA, the emissions would not cause unacceptable impacts. .

No particulate matter (PM2.5 or PM10) concentrations are predicted to exceed the target levels and the impact from operational phase works would be insignificant. In order to confirm these modelled predictions during operation, monitoring would be undertaken by the developer using the same gravimetric sampling method that is being used currently to assess the baseline.

Having undertaken a detailed assessment, the EA is satisfied that the emissions from the flare would be insignificant at locations closest to the site. In terms of the public health impact of the flare emissions, the EA'S audit checks, modelling and sensitivity analysis confirms there would be no exceedance of standards established for human protection.

Based on the information contained within the application, Public Health England has no significant concerns in relation to the potential emissions from the site adversely impacting the health of the local population, providing the developer takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice

Comprehensive monitoring of the practices and the site, overseen and regulated by the EA, would ensure that risks are managed effectively.

The proposal would not have unacceptable air quality impacts and would comply with national guidance and policies, together with Policy DM2 of the LMWLP and Policy EP26 of the Fylde Local Plan.

Archaeology and Cultural Heritage (Appendix 4)

As part of the EIA an assessment has been undertaken of the effects of the project on the archaeology of the area, the above or below ground remains left by previous generations including prehistory, Roman, early medieval, medieval, post medieval and later. The assessment concludes there would be significant effects on archaeology and cultural heritage assets resulting from the construction, operation and decommissioning of the proposed exploration compound, the construction of the associated access route and the installation of the seismic monitoring array.

To mitigate the impact of the development works the most appropriate way to implement a scheme of investigation would be to carry a strip, map and record exercise during the excavation of the topsoil if the monitoring archaeologist identifies any features requiring further investigation

Subject to the imposition of a condition requiring the implementation of a programme of archaeological work is secured prior to commencement of development it is considered the development would not have an unacceptable impact on archaeology, would not have an unacceptable cumulative impact in conjunction with the Roseacre Wood proposed development and would comply with policy EP21 of the Fylde Local Plan.

Greenhouse Gas Emissions (Appendix 5)

The project will generate some greenhouse gas emissions. But providing the operational practices are adhered to and regulated by the EA, the emissions would not cause unacceptable impacts.

The EA permit requires that during drilling of the exploratory boreholes, fugitive emissions of natural gas are to be prevented by increasing the hydrostatic pressure of fluids so as to prevent gas release. The well will also be equipped with physical control equipment which enables the borehole to be shut at the surface to prevent escape of gas emissions. Gas monitoring equipment will be in constant use at the

surface. The permit does not allow the venting of natural gas unless it is necessary for emergency reasons. Comprehensive monitoring of the practices and the site, overseen and regulated by the EA, would ensure that any risks are managed effectively.

The EA's permit would regulate fugitive emissions of methane. Venting would not be permitted except in safety emergencies. The permit applies controls. Flowback fluid will be transferred through the separator and to the storage tanks via enclosed pipework. And as described in section 9.9 of the Waste Management Plan (which is part of the permit) pipework and connections would be tested for integrity prior to use and would be monitored during operations. Importantly, methane monitoring would take place before, during and after operations.

The major source of greenhouse gas emissions from the proposal is however CO₂ from the combustion of natural gas in the flare. The operator has justified the use of a flare rather than using the gas on site by demonstrating to the EA that the costs of using the gas would be disproportionate for the 90 day periods. It is also not reasonably practicable to connect the flow of extracted natural gas to the gas grid during the initial flow tests. This is because the flow rates are unknown and the quality of the gas produced may not be compatible with gas grid requirements without further processing. In addition, in order to establish whether there is sufficient flow of gas to move to extended flow testing, there needs to be an uninterrupted flow. Using the gas to meet energy requirements on site would necessitate interrupting the gas flow, preventing the collection of the required data for analysis.

The project's total carbon footprint is 118,418 to 124,367 tonnes of carbon dioxide equivalent (tCO₂e). This is made up of approximately 94% direct emissions and 6% indirect emissions. 73% of the project carbon footprint could be attributed to flaring.

Average annual greenhouse gas emissions would be 22,618 tCO₂e per year, which is 0.18% of the county's annual emissions as set out in the Lancashire Climate Change Strategy (2009). The project's emissions would be just over 3% of the Borough's annual emissions as set out in the Strategy. The emissions would be short term and therefore are considered to be acceptable and would not lead to any unacceptable impacts and would comply with Policy DM2 of the LMWLP and Policy EP26 of the Fylde Local Plan. .

Community and Socio-economics (Appendix 6)

The applicant has undertaken an assessment of the community and socio-economic effects of the proposal. The applicant's assessment identifies that the proposal would have a number of community and socio-economic effects consisting of:

- Temporary loss of local amenity value through site activities, traffic and influx of population area.
- Employment generation, with direct employment for initial exploration wells predominantly drawn from beyond the local area, but with indirect and induced effects from local spending and the influx of population on Site (local supporting industry, hotels and subsistence for example);
- Increased spending in the agriculture sector from increased landowner income;

- Opportunity costs from the loss of agricultural land;
- Community disturbance from any protest activities, or site works.
- Effects of increased local spending from the community benefit payment from the applicant via the Community Foundation for Lancashire to local communities (although the applicant acknowledges that such payments are not a material consideration in deciding whether to grant planning permission and are not presented as such, but arte of the view that they would be a positive effect flowing from the development).

An assessment of the potential community and socio economic impacts has also been carried out by the County Council. The proposal is for a temporary project but it has the potential to have impacts that may impact on community, social and economic factors particularly relating to the temporary loss of local amenity value through site activities, traffic and influx of population area; community disturbance from any protest activities; impacts on tourism and agricultural production; many of these potential impacts (and more) are referred to in representations opposing the proposal. However, there would also be opportunities for employment generation, with direct employment for initial exploration wells predominantly drawn from beyond the local area, but with indirect and induced effects from local spending and the influx of population on site such as local supporting industry, hotels and subsistence; increased spending in the agriculture sector from increased landowner income although these are difficult to quantify; and whilst it is not a material consideration for planning purposes, the opportunity for community benefit payments.

Subject to the adherence to regulatory requirements it is considered that the community and socio economic impacts could be kept to a minimum. In the event there were to be disturbance leading to damage, the applicant has committed to investigating complaints and has demonstrated insurance would be in place if damage is proven to be attributable to their operations. It is not possible to quantify what impacts a proposal of this nature would have on either property values or the market, but these are not material planning considerations.

Stay Lancashire has publically countered the view that the site would adversely affect tourism and is of the view that the hospitality industry would benefit. There are no statistics that support either view.

In terms of community cohesion, recent experience has shown that drill sites can attract public attention and a degree of protest and environmental extremist activities may also occur. The Lancashire Constabulary have been consulted on the proposals and have not objected. It is right to assume that public order would be maintained by the police although there would inevitably be costs associated with such as has been evidenced by other sites elsewhere in the country.

It is concluded that whilst there would be some localised impact on residents in the community at the nearest properties, the project would not have a significant effect on wider communities or socio-economic factors, particularly in groups with protected characteristics. There would not be a material impact on agricultural land or practices and there would be some-economic benefits during the exploration stage to the local economy. It is therefore considered that the proposal would not have an unacceptable impact on communities or socio-economic impacts and that to the contrary, there would be some community and socio-economic benefits. It is therefore concluded that the proposal would accord with Policy DM2 of the LMWLP.

Ecology (Appendix 7)

The ecological receptors, of nature conservation value, identified within the zone of influence of the main site included; hedgerows, bats, breeding birds, wintering birds and brown hare.

The ecological receptors, of nature conservation value, identified within the zone of influence of the array sites included; wintering birds connected to Lytham Moss BHS and Morecambe Bay SPA and the Ribble and Alt Estuary SPA and ground nesting breeding birds.

The routes of potential impact are;

- Loss of habitat.
- Disturbance due to increased noise levels, vehicle and personnel movements (visual) and increased light levels.
- Alteration of bat behaviour due to heat emitted by the flare stack.
- Accidental injury or killing of brown hare.

A range of mitigation measures and compensation measures are to be adopted to either reduce the level of impact so that it is no longer significant or provide alternative habitat to ensure that the local population is not significantly impacted by the project. These measures would be presented within a Biodiversity Mitigation Strategy (BMS).

Following implementation of the mitigation measures, there would be no unacceptable impact on biodiversity as a result of the proposal and therefore accords with Policy DM2 of the LMWLP and Policies EP12, EP15, EP16 and EP17 of the Fylde Local Plan.

Hydrogeology and Ground Gas (Appendix 8)

The applicant has undertaken an assessment of the potential impacts relevant to hydrogeology and ground gas. The assessment looks at the potential effects of the project as part of the well pad activities and materials in transit, the well construction and integrity, and features created by the hydraulic fracturing on the quality of the water environment, both ground water and surface water and the possible creation of subsurface pathways to sensitive features that could result in pollution.

The geology beneath the site is described and the interpretation by the applicant has been assessed by the EA. The assessment considered the potential for retained pollutants in the shale rock to migrate upwards into contact with any groundwater bearing formations. This outcome has been assessed as very low risk and with no plausible pathway. The rock formation directly above the target formation, known as the Millstone Grit (at depths of ~1300m to ~1550m below ground level), has been assessed as a groundwater unit. A groundwater activity permit is therefore required because of the theoretical possibility that fluid could migrate from the target formation into the Millstone Grit. The EA has assessed the possibility of fluid migration as very low risk. This is because of the absence of a pressure gradient driving the fluid once the fracturing pressure is turned off. Moreover, close monitoring of fractures (using the micro seismic array and in accordance with the

Fracture Plan that must be approved by DECC and the Agency) will prevent any fractures moving into the Millstone Grit from the target formation, thus preventing the movement of fluid.

The EA is satisfied that the potential risks to groundwater have been adequately identified and addressed through mitigation measures in the permit.

Groundwater is defined in the Environmental Permitting Regulations 2010 (EPR 2010) as all water that is below the surface of the ground in the saturation zone and in contact with the ground or subsoil (Regulation 2(1)). There are no restrictions on the quality of the groundwater or the depth of the geological formation that contains that groundwater. The EA has determined that the Bowland Shale's and the Hodder Mudstones do not contain groundwater because any water that is within the formations will be bound to the rock and will be relatively immobile. The Millstone Grit formation which is directly above the Bowland Shale will contain groundwater, and although the formation will have a relatively low permeability due to the depth of burial the water content is considered to meet the definition of groundwater as defined in the EPR 2010. Other formations through which the drilling will take place will also contain groundwater, such as the Sherwood Sandstone, albeit of very poor chemical quality.

The assessment also considers how the well pads and the wells have been designed to prevent leaks or spills from entering the wider environment (the soil, groundwater, surface water or the atmosphere) and cause pollution. The well design is assessed by the HSE and the EA in accordance with their respective regulatory requirements and industry guidance. The EA also assesses the proposed drilling fluid and the fracture fluid and requires it to be non-hazardous.

Prior to and during works, groundwater water and surface water would be monitored. The monitoring would be agreed with the EA. The EA would require baseline monitoring of groundwater, air quality and surface water for approval before the start of operations.

When the works are finished, the wells would be plugged and abandoned in accordance with the regulatory requirements of the HSE and the EA and industry guidance. The plugging and abandonment of the well including the monitoring of the ground water quality and gas concentrations are matters for the HSE, the EA and the DECC.

The assessment concludes that the probability of source pathway receptor linkage associated with contaminant release during well pad construction and access is low; that the contaminant release due to defects in the pad membrane is low; that the contaminant release due to overflow discharge from the well pad drainage systems is low; that liquid spray off due to high pressure equipment failure is low; that the spill of contents of vehicles in transit on the public highway is low; that the loss of well integrity due to poor well construction is very low; that the loss of well integrity caused by hydraulic fracturing is very low; that the loss of well integrity is very low.

The Manchester Marls forms a seal between the ground surface and shale that traps the natural gas within the rock. It therefore acts as a barrier and prevents the movement of water and gas up towards the surface from deeper layers of rock. The Sherwood Sandstone is a porous rock and contains water. It is considered by the EA

to be a poor quality aquifer because of its salinity and is therefore not used for drinking water.

The well pads and the wells have been designed in accordance with the HSE and EA regulatory requirements and industry guidance. The EA also assesses the proposed drilling fluid and the fracture fluid requires it to be non-hazardous. Prior to and during works, groundwater water and surface water will be monitored. The monitoring would be agreed with the EA. The EA would require baseline monitoring of groundwater, air quality and surface water to be established before the start of operations. When the works are finished, they would be decommissioned in accordance with the regulatory requirements of the EA and the HSE and industry guidance. The plugging and abandonment of the well including the monitoring of the ground water quality and gas concentrations are matters for the HSE and the DECC.

There are possible impacts associated with the well pad construction and activities. The site construction involves laying an impermeable membrane over the whole compound area to prevent accidental slippage and rainwater from entering the underlying soils, groundwater and nearby water courses. The platform is bounded by a ditch, for the purpose of pollution control. Only clean surface water will drain into a water course (outside drilling, hydraulic fracturing and initial flow test stages) and the Environment Agency has advised that the arrangements are acceptable subject to conditions.

There are potential impacts associated with the well design and construction and proposal to manage these impacts. It is proposed that the well would be drilled, constructed and tested in accordance with regulatory requirements and industry standards. The well design would comprise a two barrier cement sealed design. Details of the well design would be reviewed by the Independent Well Examiner. Additionally, the Environment Agency considers the proposed well construction would form a barrier to prevent the escape of fluids. The EA is satisfied that well integrity is assured through compliance with the well examination regime and regulation by the Health and Safety Executive, and further through conformance to Oil & Gas UK and UK Onshore Operators' Group good practice guidelines for well design and construction. Hydraulic fracturing plans and a seismic monitoring programme would be submitted to DECC and the EA for approval prior to hydraulic fracturing operation commencing; operation of a traffic light system for monitoring of induced seismicity is also designed to mitigate the risk from induced seismicity, including any potential for damage to well integrity. The potential for fractures that are propagated by hydraulic fracturing to extend beyond the target formation has been assessed to be very low and the growth of fractures resulting from each fracturing stage would be assessed with the aid of the seismic monitoring array.

The EA has assessed the proposed fracture fluid as non-hazardous. It is also satisfied that the chemical similarity between the fluid and the water in the Millstone Grit is sufficiently high that any indirect discharge would be insignificant. Finally, the EA believes that if any fluid reaches the Millstone Grit it would not move far from the point of entry because of the confined nature of the rock. If needed low toxicity oil based muds would only be used below the Manchester Marl formations and with the approval of the EA.

Prior to and during works, groundwater water and surface water would be monitored (see application LCC/2014/0097). The monitoring would be agreed with the EA. The

permit includes pre-operational requirements to provide baseline monitoring of groundwater, air quality and surface water for approval before the start of operations. The permit also includes a requirement to provide for a monitoring plan for at least 4 weeks prior to gas flaring. The EA has specified monitoring of groundwater and surface water in the permit and this would be carried out until the permit is surrendered.

When the works are finished, they would be decommissioned in accordance with the regulatory requirements of the EA and the HSE and industry guidance. The plugging and abandonment of the well including the monitoring of the ground water quality and gas concentrations are matters for the HSE, the DECC and the EA and their respective regulatory regimes. In particular, the plugging and abandonment of the borehole is regulated by the HSE under the Offshore Installations and Wells (Design and Construction etc.) Regulations 1996. These Regulations contain provisions relating to well integrity and abandonment as well as the selection of materials. The Regulations apply to all wells drilled under landward licences, the key objectives of which are to prevent the escape of fluids from the well which might result in pollution of freshwater or ground contamination. Under the Regulations, well abandonment techniques must prevent the transfer of fluids created by pressure gradients between different zones. Such transfer is achieved by means of the original borehole casing and the cementing and plugging operations that are undertaken as part of well abandonment.

Paragraph 122 of the NPPF requires that planning authorities should not seek to control processes or emissions where these are subject to approval under separate pollution control regimes and that LPA's should assume that these regimes will operate effectively. Nonetheless, paragraph 112 of PPG Minerals, notes that before granting permission the local planning authority should be satisfied that the issues dealt with under other regimes can be adequately addressed by taking advice from the relevant regulatory body. The County Council has consulted with the EA and HSE, neither of which has objected.

The EA has granted the applicant the necessary environmental permits needed to carry out their proposed operations. The permits set out the conditions needed to protect groundwater, surface water and air quality. Now permits are issued, the applicant would have to comply with the proposed conditions that are designed to ensure that operations do not cause harm to people or the environment. The EA has assessed the proposed activities that could involve the discharge of pollutants into groundwater (a 'groundwater activity') and the nature of these pollutants. The EA is satisfied, subject to conditions, that there is minimal risk of direct discharge of pollutants into groundwater. The EA is also satisfied that the indirect entry of non-hazardous pollutants will be limited so as not to cause pollution.

Hydrogeological issues and the protection of surface and ground water have been assessed by the applicant and the risks associated with such were considered to be low or very low.

The EA has advised that the scenarios of pollution of shallow groundwater and surface waters due to fracking operations, as suggested in some representations, are not credible. They also say the suggestion the proposal is unsafe because there are faults in the vicinity are unfounded.

The EA and HSE have been consulted and have advised on the regulatory regimes that would be employed to manage the risks and that they are satisfied that that such risks are very low and could be managed in a way that would not cause any unacceptable impact. It is considered that the site can be contained and surface waters managed in a way as to prevent pollution to adjoin land or nearby watercourses.

It is considered reasonable and acceptable for the County Council to assume that these regimes will operate effectively and can be satisfied that the issues dealt with under other regimes can be adequately addressed. This has now been established in case law. Boreholes for ground water monitoring are the subject of planning application LCC/2014/0097. Subject to conditions controlling the management of surface water it is considered that the proposal could be acceptably controlled by other regulatory regimes and would not have any unacceptable impacts on hydrology or ground or surface water and would comply with national guidance and with Policies NPPF1 and DM2 of the LMWLP.

Seismicity (Appendix 9)

A full assessment of the likely effects of induced seismicity associated with the proposed hydraulic fracturing operations including the likely effects on surface deflections (subsidence) from gas extraction has been carried out. It recognises seismic events could occur as a result of stress changes on a plane of weakness (a fault) caused by the growth of engineered fractures and the transmission of fluid pressure into a critically stressed fault. The assessment has been carefully considered against the findings of the Royal Society, in light of national guidance and with regard to specialist advice that has been sought from DECC and the County Council's own appointed seismologists and in light of the views and recommendations of the Director of Public Health. The views expressed by groups and individuals have also been carefully considered. The full assessment of such is set out in a separate appendix 9.

The Royal Society concludes that health, safety and environmental risks associated with hydraulic fracturing as a means to extract shale gas can be managed effectively in the UK as long as operational best practices are implemented and enforced through regulation. DECC will control fracking in a way, through a traffic light system that prevents fracturing generating more than 0.5M_L which means induced seismicity will not be felt at all, or only by a few under especially favourable conditions. Whilst perceived fears are understandable, they cannot be supported by independent review and guidance. It is safe to assume that BGS or other appropriate bodies will carry out national surveys to characterise stresses and identify faults in UK shales and operators will carry out site-specific surveys to characterise and identify local stresses and faults. It is proposed that seismicity will be monitored before, during and after hydraulic fracturing (see application LCC/2014/0097). Monitoring has already been carried out in the Beconsall area. A traffic light monitoring systems would be implemented and data fed back to well injection operations so that action can be taken to mitigate any induced seismicity and which would be overseen by DECC and whom the county council can be satisfied will operate within its own regulatory framework.

With regard to possible subsidence DECC has reported [Review and Recommendations for Induced Seismic Mitigation (April 2012)] that there are no

documented cases of fracturing operations causing subsidence or tremors large enough to cause damage at the surface and that unlike coal mining, shale gas production does not remove large quantities of rock from underground, which can cause subsidence. The report notes that subsidence could occur when rock is compressed and collapses in on itself, but that shale rock is not easily compressed, so subsidence is unlikely and that rock samples would be tested before any commercial production is approved. The conclusions of the applicant and the previous conclusions of DECC are accepted. It is considered that the proposed exploration and appraisal of shale gas would not lead to any subsidence at surface and should there be an opportunity for any further stage of exploration that could lead to commercial exploitation, that would require the benefit of planning permission and would be the subject of greater scrutiny by DECC.

With regard to the representations received it is not likely that seismic activity would lead to injury to humans or wildlife or destabilise the geology in a way that would generate earthquakes that would place the Heysham power station or the proposed underground gas storage project at Preesall at risk. The County Council is not aware of any verified evidence of damage to property as a consequence of the seismic events at Preese Hall or that the surface strata was undermined in any way or present a risk of subsidence to moss land or nearby properties. There is no evidence to support that fact induced seismicity would led to pollution of surface or ground water or that the process could be safely carried out. A 3D survey has been carried out to give a clear understanding of the geological conditions and faulting in the area and the sites, depth and direction of drilling and horizons proposed to be fracked have been chosen and designed in a way to minimise seismic movement and which, if undertaken in accordance with a traffic light system would prevent the migration of fluids. There are no mine workings in the Fylde.

Whilst the concerns are acknowledged it is concluded that they cannot be supported and that the County Council can assume and be satisfied that the development would be carried out to meet the requirements of DECC and the EA.

Land Use (Appendix 10)

As part of the EIA an assessment has been undertaken of the impacts of the proposal on the land use. The agricultural land affected (7.5ha) has been assessed as good or moderate in terms of its agricultural land quality. A soil survey has been carried out and data on farming practices collated. The site forms part of a 162ha farm holding of which 7.5 is proposed to be used for the development – approximately 1.5%. The land is grassland grazed by milking cattle, produces hay crops for sale, dairy replacements and beef are reared and used for winter grazing by sheep. The land lost to the site would be replaced by an additional 8ha of rented land. The land is actually classified as Grade 2 (best and most versatile) land but such classification is at a significant scale covering large areas of land and within which land may be of varying quality. However, a more detailed assessment of the land affected by the proposal has been carried out by the applicant which identifies approximately 1.5ha as good quality (Class 3a) with approximately 1.1 ha moderate quality (Class 3b). Policy EP22 of the Fylde Local Plan protects the permanent loss of the best and most versatile agricultural land (Grades 1, 2 and 3a). The applicant has advised that the majority of the land associated with the well pad and access track has been assessed as moderate quality.

The assessment concludes the impact on the loss of agricultural land is not significant.

An assessment of the ES has been carried out and it is concluded that the impact of the proposal in terms of land use planning would not be significant. The loss of agricultural land would be for a temporary period and provided that appropriate mitigation measures are imposed with regard to soil compaction and conditions controlling the storage of soils and the reinstatement of the land, the proposal would be acceptable. The proposal would accord with Policies NPPF1 and DM2 of the LMWLP.

Landscape and Visual Amenity (Appendix 11)

As part of the EIA an assessment has been undertaken by the applicant of the impacts of the proposal on the landscape and visual effects. It concludes there would be no significant landscape effects although there would be some very localised direct change due to the development temporarily altering a very small proportion of the local character area during construction of the well pad but no effect during other phases. The visual findings conclude there would be significant adverse visual effects arising during the drilling, hydraulic fracturing and flow testing phases. Seven of the principal viewpoints would experience significant adverse visual effects. Six of these are residential receptors within and one with a recreational viewpoint. No significant adverse visual effects were judged to occur on any receptor more than 930m from the site during any phase of the project.

Mitigation measures are proposed in the form of 4m bunds around the well pad, landscaping around the well pad to help filter views, allowing hedgerows to grow taller, minimisation of light spill, gap filling in existing hedgerows.

The ES concludes there would be no cumulative effects from other developments proposed or committed that would have a significant impact on visual amenity. The land is of moderate agricultural quality and it is concluded that there would be no significant effects on farming practices.

To address previous concerns relating to noise at the closest sensitive receptors during night time hours, the applicant, as part of the submission of further information to reduce noise levels and noise impacts, proposed additional noise attenuation measures. These are in the form of solid barriers around the site and around individual pieces of plant and equipment. The effect of these would be to reduce the noise levels to a maximum of 39 dB L_{Aeq} at night. It is also proposed to limit the height of the drilling rig to 36m. A revised assessment of the landscape impacts of the proposed measures has been carried out by the applicant and who feels that such measures would not only assist in the mitigation of noise during day and night time operations but would also reduce the visual impact of the site further, particularly with a lower height drilling rig.

An assessment of the ES and the further information has been carried out and advice provided by the County Council specialist advisor on landscape. The assessment finds that given the undulating and open nature of the landscape, the development would have some significant landscape impacts but only for a limited period and in the main restricted to locations near to the site, in particular properties at Staining Wood and Foxwood Chase and from Preston New Road. The

development would not affect any conservation areas, listed buildings or protected trees. It would not require the removal of any significant existing landscape features and therefore any landscape change would not be of a permanent nature. In the long term, it is considered the development is acceptable in terms of landscape impacts. However, it is considered that any planning permission should be subject to conditions relating to the colour of the plant and equipment within the applicants control which would be seen above the 4m high landscaping mound and proposed attenuative fencing, the design and location of the perimeter landscaping mounds, the colour and design of fencing, lighting design and control and details of the restoration and aftercare of the site to include the replanting of any hedgerows that are removed and restoration.

It is therefore concluded that the proposal would generate significant localised landscape and visual impacts in the short term and which would be unavoidable due to the nature and duration of the proposal. However, whilst the duration is over an extended period of time, it would still be temporary. Mitigation measures are proposed and there is scope to further mitigate the likely effects by controlling the colour of the various cabins and other temporary buildings within the applicants control would be seen above the 4m high mounds and barriers in a more appropriate colour than proposed (blue) albeit the additional proposed noise mitigation measures of employing solid barriers would reduce the visual impact of the site. Nevertheless, subject to such conditions it is considered that the proposal would not be contrary to Policy D2 of the Lancashire Minerals and Waste Local Plan and whilst it could be seen as contrary to Policy EP11 of the Fylde Local Plan, the proposed development, due to its nature for a temporary period could not be expected to be designed in a way to meet the requirements of this policy.

Lighting (Appendix 12)

As part of the EIA an assessment has been undertaken of the effects of the potential night time light obtrusion from the project in view of the site being in a rural location away from built up areas and where there is little existing night time lighting. The assessment has used national policy and light obtrusion guidance including the Institute of Lighting Professionals (ILP) Guidance Note for the Reduction of Obtrusive Light. An assessment of the impacts has been carried out against the policies of the NPPF, the policies of the development plan and with regard to the views of the county councils specialist lighting advisor, the Director of Public Health and in view of representations received (Appendix 14).

The County Council's lighting advisor has raised no objection to the proposals and has advised that the lighting design generally complies with the required standards, with the exception of predicted sky glow, which marginally exceeds permitted standards. He does not anticipate any issues to the surrounding area, highway and it's users on the grounds of safety.

The Director of Public Health has recommended that an assessment of light pollution as part of the site operations should be carried out, and if there are likely to be significant impacts associated with light pollution from the sites that cannot be mitigated or controlled, the Applicant should be requested to consider the opportunity to offer to fit blackout blinds to those homes most likely to be affected.

In terms of landscape impact, lighting has properly been assessed. The assessment concludes there would be some light pollution at night. This would be for a temporary period but would be significant particularly when seen from the A583, nearest residential properties at Staining Farm and the villages of Little and Great Plumpton. Notwithstanding it would be for an extended period of time, with the mitigation measures proposed, and which could be controlled by condition, on balance, it is considered that lighting could be made acceptable and that the impacts associated with such would not be so great to affect amenity on a permanent basis or lead to unacceptable effects on nature conservation to constitute a sustainable reason for refusal. It would not be appropriate to require blackout blinds to be fit to those properties most likely to be affected. Subject to the mitigation measures proposed, and which could be controlled by condition, it is considered on balance that the proposed lighting for a temporary period would be acceptable for the purposes of the NPPF Policy DM2 of the LMWLP and Policy EP28 of the Fylde Local Plan.

Noise (Appendix 13)

The applicant's noise models for drilling and hydraulic fracturing noise have been revised using more detailed inputs, particularly in relation to the drilling noise based on measurements of the actual rig proposed for the application site. The adopted noise prediction methodology is appropriate, and is implemented in widely used noise modelling software.

The majority of the noise model inputs are clearly set out in the report, and simplified noise predictions undertaken by Jacobs using the same input data produce similar results to those calculated by the applicant. For hydraulic fracturing noise, the solution proposed is a solid noise fence located 2m from the generators, 5m high and topped with a 1m return angled at 45° projecting into the enclosure. Predicted noise levels of 52dB were reported for Roseacre Wood at the closest sensitive receptor. For the drilling noise, the proposed mitigation measures are set out in the applicant's further information. This includes a 7m high sound barrier around the rig together with various other interventions.

In implementing these measures, the applicant indicates that noise levels of 37dB can be achieved at the closest receptor to the site.

The County Council's specialist noise consultant at Jacobs has replicated these and, the result calculated is within 1dB of the level predicted by the applicant. It is considered that the noise reduction measures are reasonable. There is no reason to believe that these reductions cannot be achieved in practice, although it is noted that the barrier effect is dependent on geometry and if the drilling rig is arranged differently to the representation in the noise model then the barrier design may need to be altered accordingly.

A framework for a noise management plan is provided by the applicant. It is recommended that a noise management plan covering the areas identified in the framework be required by condition. This should include long term noise monitoring to demonstrate that the noise levels predicted by the applicant are being achieved at noise sensitive receptors

The Lowest Observed Adverse Effect Level (LOAEL) of night noise from the World Health Organisation (WHO) is 40 _{dB_Lnight, outside} and can be considered a health based

value of the night noise guidelines necessary to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly, from the adverse health effects of night noise. The predicted noise level of 37dB is below the WHO guideline.

The predicted noise level of 37dB is also considered to be in accordance with Planning Practice Guidance which states that:

“For any operations during the period 22.00 – 07.00 noise limits should be set to reduce to a minimum any adverse impacts, without imposing unreasonable burdens on the mineral operator. In any event the noise limit should not exceed 42dB(A) LAeq,1h (free field) at a noise sensitive property”.

Noise from the site is not expected to have a prominent impulsive character. Nevertheless it is recommended that, should planning permission be granted, consideration be given to a condition limiting the number of L_{Amax} noise events exceeding a certain threshold level at night.

Noise from the site is not expected to have a tonal character. Nevertheless it is recommended that, should planning permission be granted, consideration be given to a condition to ensure tonal noise does not occur.

With the additional mitigation measures proposed by the applicant, it is considered that efforts have been made to reduce any adverse noise impacts that would arise from the drilling and hydraulic fracturing activities to a minimum. Furthermore, the resulting noise levels from the activities are considered to be in accordance with relevant government guidance.

The proposed development is therefore consistent with Policy DM2 of the JLMWLP and Policy EP27 of the Fylde Borough Local Plan. It has been satisfactorily demonstrated that noise impacts would be reduced to acceptable levels and would not result in harm to the amenity of neighbouring properties by way of noise pollution.

Resources and Waste (Appendix 14)

The applicant has undertaken an assessment of the management of waste, including inert, non-hazardous and hazardous waste, and including waste water. The wastes described would be solid, liquid and gas and both oil and gas are defined as minerals. The waste produced would be:

- Non-hazardous and inert waste.
- The accumulation of injected hydraulic fracturing fluid which would remain in the underground target formation and has become waste;
- Above ground hazardous including the temporary deposit and accumulation of hazardous waste in storage containers as the wells are successively drilled. The hazardous waste would include flow back water and drill cuttings coated with residual Low Toxicity Oil Based Muds (“LTOBM”).
- The incineration by flaring of hazardous waste, namely natural gas above 10 tonnes per day, as an activity listed in schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010.

The management of waste is set out in the waste management plan and subject to environmental permits that are regulated by the EA and required by the applicant to carry out their proposed operations. The permits set out the conditions needed to manage waste and naturally occurring radioactive material (NORM). Now permits have been issued, the applicant would have to comply with the proposed conditions that are designed to ensure that operations do not cause harm to people or the environment.

The applicant's assessment concludes that all the types of waste generated would not result in a significant effect; that there is sufficient capacity to treat flow back fluid even though at peak times it could use up to 68% of identified treatment capacity and which could have a significant effect. Consequently re use of flow back fluid is proposed to reduce this effect. Fracturing at the site would be staggered with Roseacre Wood (should planning permission be granted at this site) to avoid increasing weekly waste water production rates to minimise cumulative effects. In the event on site storage and treatment capacity is exceeded, operations would be suspended. In their Decision Document supporting the waste management permits, the EA has also addressed concerns regarding the availability of treatment capacity and state "*We are satisfied that there is currently adequate capacity to treat and/or dispose of the waste generated by the permitted activity*" (EA, Decision Document, Annex 1, B). This issue has been reviewed by the EA in their determination of the Mining Waste Permit and the EA is satisfied that the applicant has used appropriate information to design the proposals and that there are sufficient controls in place to ensure that flowback is controlled, treated and disposed of appropriately.

The applicant would have to enter into contracts with treatment facilities if planning permission is granted and prior to fracturing operations commencing which would ensure sufficient treatment capacity is available. Section 17.8.5.3 of the ES (Preston New Road ES paragraph 378) describes the steps the applicant would take if higher flowback fluid production was experienced to ensure the quantity of flowback fluid requiring treatment would not exceed the available treatment capacity. The steps would comprise:

- Provision of additional on-site tank capacity to temporarily store flowback fluids so that off-site disposal would not exceed the treatment rate agreed with the relevant treatment works; Consideration of shutting off the well for a short period (i.e. temporary suspension of flowback production) to allow flows off-site to be controlled to within the available treatment capacity; and
- Consideration of amendments to hydraulic fracturing operations to reduce flowback volumes e.g. reduced number of hydraulic fracturing stages, smaller volumes etc.

General measures would be employed to reduce the quantity of waste generated, increase the re-use, recycling and recovery of materials and improve waste management.

An assessment of the proposals has been carried out. With regard to inert, non-hazardous and hazardous waste associated with the construction, drilling, hydraulic fracturing, initial and extended flow testing and decommissioning it is considered that subject to compliance with the permits issued by the EA the quantities generated would not result in a significant effect.

The treatment of the quantity of waste water generated by the project would result in a significant effect and so mitigation to reduce this effect is proposed to include recycling of flow back water and staggering of operations. In particular there would be a requirement, wherever possible, to re-use the flow back fluid once the gas has been separated. This would reduce the amount of waste which needs to be disposed at an offsite facility. About 10-40% of the injected fluid is predicted to return to the surface.

The applicant proposes to leave some fracture fluid deep underground. The EA is of the view that leaving some of the retained fluid in situ is the 'Best Available Technique'. The EA has assessed the components of the fluid to be used in fracking process and is satisfied that it is non-hazardous. They are also satisfied that the fluid that would be retained underground would be non-hazardous and that over time the retained fluid would become indistinguishable from the water already present in the target formation.

Naturally occurring radioactive material (NORM) is present in many geological formations including oil and gas bearing strata such as shale formations. The flow-back fluid that returns to the surface following hydraulic fracturing as well as the sediments and scales in gas or water process vessels, is likely to contain sufficient NORM that it will be classed as radioactive waste. The level of radioactivity is considered to be extremely low. The EA has assessed the impact and proposals for NORM disposal and is satisfied that the applicant has demonstrated that it can have suitable arrangements in place with licenced waste disposal companies for its treatment.

Drill cuttings can be contaminated with hazardous waste. All hazardous waste must be stored in solid steel containers which are subject to inspections. The EA has advised that it is satisfied with the proposed arrangements.

With regard to representations received, it is considered that waste can be acceptably contained and that there are available facilities with capacity to accommodate the waste to which safe purpose designed transport would deliver it. The permit restricts the available storage on site and the continued production of such in the event off site facilities were unavailable. The site can be contained in a way to prevent discharge or over spill off site and provide secure storage facilities. The permit applies the necessary controls on waste quality standards. There will be no risk of migration of fracking fluids that could result in cross contamination of water resources and leaving fluids in the ground would not result in contamination in their own right. The waste is not toxic and would not be stored close to residential properties or schools and the site would be secure preventing unauthorised access.

Paragraph 122 of the NPPF requires that planning authorities should not seek to control processes or emissions where these are subject to approval under separate pollution control regimes and that LPAs should assume that these regimes will operate effectively. Nonetheless, paragraph 112 of PPG Minerals, notes that before granting permission the local planning authority should be satisfied that the issues dealt with under other regimes can be adequately addressed by taking advice from the relevant regulatory body'. The County Council has consulted with the EA which has not objected.

The EA has granted the environmental permits needed to carry out the proposed operations. The permits set out the conditions needed to manage waste and NORM. Now permits are issued, the applicant will have to follow the proposed conditions that are designed to ensure that operations do not cause harm to people or the environment.

The EA is satisfied that the permit and associated conditions will require that extractive wastes are managed in a way that minimises harm to human health and the impact on the environment. The operator has demonstrated this through a waste management plan that accompanies the permit. The EA is satisfied that the proposals are in line with the waste hierarchy.

It is considered that the proposal could be acceptably controlled by other regulatory regimes and would not have any unacceptable impacts and would comply with national guidance and with Policies NPPF1 and DM2 of the LMWLP.

Transport (Appendix 15)

A full assessment of traffic impacts associated with the proposed development has been carried out by the applicant as part of the EIA. An assessment of the impacts has been carried out against the policies of the NPPF, the development plan policies and in light of advice received from the Highways Agency, LCC Developer Support (Highways) and with regard to those views received in representations.

The applicant proposes to access the site via a new access from the north side of the A583 (Preston New Road). Traffic to the site could travel either east or west along the A583 in order to gain access to the M55 at junctions 3 or 4. Both routes to the motorway are comprised of major roads and would not require HGV traffic to pass through major built up areas.

The access would be created by breaking through the existing hedgerow on the north side of the A583 to create an access point of sufficient width to allow the two way passage of HGV's. The access road to the site compound would be surfaced to withstand HGV traffic. The works to create the access would require the removal of approximately 190m of hedgerow including two trees in order to create the required visibility splays.

The ES includes an assessment of traffic impacts which includes details of the anticipated traffic flows and an assessment of likely impacts in terms of highway capacity and safety.

The peak traffic flows would occur as a result of combined traffic associated with activities at more than one well. The total traffic numbers in the ES are based on such conditions. The peak traffic generated would be around 50 two way HGV movements per day which would occur for around one week on eight occasions over the life of the project.

The forecast traffic flows are below the thresholds in Department for Transport Guidance for Transport Assessments which define when a full transport assessment is required. The main traffic impacts arising from the development therefore relate to the size of vehicles rather than vehicle numbers. The assessment has therefore concentrated on selection of the appropriate access routes to the site.

The site is located on the A583 which is a major highway carrying around 13,000 vehicles per day including over 250 HGV's. The proposed development would therefore only increase total traffic on this road by around 1%.

The proposed route via the motorway network would be acceptable and would not pass through any major residential areas. There would be an increase in HGV movements on the strategic highway network but it is considered there is sufficient capacity to accommodate such. There have been representations objecting to the proposal and the impacts associated with an increase in HGV movements but most of these cannot be supported. There would be some localised loss of amenity as a result of an increase in movements, most particularly to those residential properties close to the access, but this would be for a temporary period; it is considered that such impacts would not be so great as to constitute a sustainable reason for refusal. The proposed route and access would be acceptable to the Highways Agency and to LCC Developer Support (Highways). Subject to conditions requiring details for the construction of the access points to the site, the internal access road, traffic management plan, off site highway works, construction method statement, monitoring of highway conditions, provision of drainage and measures to prevent air and ground and surface water pollution it is considered that the development would be acceptable in terms of highway safety and capacity issues and would not be in conflict with Policies NPPF1 and DM2 of the LMWLP.

Water Resources (Appendix 16)

The applicant has undertaken an assessment of the impact of the proposal on water supplies and surface water runoff or drainage and the consequent impact on flood risk. The construction of the well pad would include the installation of an impermeable plastic membrane to be laid to prevent infiltration from the well pad through the underlying soils and water bodies. Ditches would be constructed around the perimeter of the well pad to collect storm water. The void space in the granular fill, ditches and the 50mm "air freeboard" would provide a storage volume to attenuate drainage flows from the site. During drilling and hydraulic fracturing operations a valve would prevent storm water from leaving the site. During these periods storm water would be removed by tanker to a licenced wastewater treatment works. At other times when the water quality in the ditch system meets the requirements of EA the site would drain freely to Carr Bridge Brook via an interceptor.

The water requirements for the Project would be provided by a pipe connection to an adjacent United Utilities (UU) water main. UU have confirmed that this supply would not affect their current customers (including residential properties). The use of mains water negates the need to transport water to the site by tanker to reduce transport impacts. Estimated daily water use during hydraulic fracturing activities has been reduced from 765³m per day to 600³m per day by reducing the proposed number of hydraulic fracturing stages and reusing flow back water to make up part of the fracturing fluid for the subsequent fracturing stages. Flowback fluid would be subject to physical treatment using ultra violet disinfection to control bacterial growth. If possible collected storm water would also be used to make up part of the fracturing fluid volume.

The assessment concludes that subject to such measures the proposed development would not have a significant effect on surface water runoff, drainage or water supplies.

An assessment of the potential impacts of the proposal on water supplies and surface water runoff or drainage and the consequent impact on flood risk has been carried out with reference to the views of the EA and UU and with regard to representations received. It is concluded that the proposal would have no adverse effect on potable water supply and would not be an unacceptable use of potable water. Flow back water would be reused resulting in lower quantities of potable water being required. Water will be supplied direct to the site thereby reducing the number of HGVs travelling to and from the site. The site would be contained and managed to ensure the protection of surface and ground water and nearby water courses. The site is in a Flood Zone 1 which is defined as having a low probability of flooding. The EA has reviewed the Flood Risk Assessment submitted with the application and is satisfied that the development would not be at risk of flooding or increased flood risk off-site. The development is therefore considered to comply with the national guidance and with Policies NPPF1 and DM2 of the LMWLP.

Public Health (Appendix 17)

The County Council's Director of Public Health has provided specific advice to inform the planning process and provide public health advice to protect and improve the health of local residents living near the proposed shale gas exploration sites of Preston New Road (planning application numbers LCC/2014/0096 and 0097) and Roseacre Wood (planning application numbers LCC/2014/0101 and 0102). The advice was published as a Health Impact Assessment (HIA) in November 2014.

The Health Impact Assessment makes 45 recommendations to a broad range of agencies, suggesting actions before, during and after any permissions or permits are granted. Appendix J contains 16 recommendations to specifically inform the determination of this application (together with the Roseacre Wood applications).

Given the advice is specific to this application, an assessment has been undertaken in relation to each of the 16 recommendations in Appendix J of the HIA.

Recommendation 4 states: 'Seek agreement with the Applicant to establish an independent comprehensive baseline and on-going long term monitoring of environmental and health conditions prior to any activity on the sites'.

The applicant has shown a willingness to enter into discussions with the County Council's Director of Public Health to support an independent, long term monitoring programme in the event that planning permission is granted.

Many representations received by the County Council refer to research conducted in North America and overseas that indicate shale gas extraction is linked to adverse health impacts.

While much research exists, and is growing in volume each year, it is difficult to gain an objective view of the veracity of the research. Anti-fracking campaigners frequently point to studies that indicate increased health risks (e.g. elevated risks of cancer or birth defects) as a result of shale gas activity in North America.

Conversely, pro-fracking campaigners point to numerous methodological flaws in the research. It is also difficult to translate the findings of research from North America into the UK environment. Operating and regulatory practices are very different.

In June 2014, Public Health England (PHE) published a review into the potential health impacts of shale gas extraction. The review drew on significant scientific evidence in peer reviewed or published reports up to January 2014. Much of the research cited by objectors in representations to the County Council was reviewed by PHE.

PHE say there have been very few epidemiological studies or health risk assessments published in the peer reviewed literature. Epidemiology is the branch of medical science that investigates all the factors that determine the presence or absence of diseases and disorders. It aims to assess the cause of a disease, and seeks to look beyond statistical associations which might be a result of chance, bias or confounding effects.

PHE highlight significant methodological flaws in the research that has been cited to the County Council.

Moreover, one study frequently cited by objectors (McKenzie, 2014) has been publically criticised by the Chief Medical Officer and Executive Director of the Colorado Department of Public Health and Environment in the USA as follows: *"we disagree with many of the specific associations with the occurrence of birth defects noted within the study. Therefore, a reader of the study could easily be misled to become overly concerned."*

PHE state that direct application of the North American research to the UK situation is impossible because of the wide differences between the two countries. It is clear from experience in the US that emissions vary widely depending on the phase of development, operational practices, the geology, local topography and meteorology, and the types of activities and equipment on-site. PHE state that such variability makes direct application to the UK situation impossible. There are also different regulatory practices in the UK.

At present there is limited environmental and health surveillance data within the published literature in relation to existing shale gas extraction operations. There have been very few epidemiological studies (as opposed to statistical associations) and those that have been carried out generally lack robust exposure assessments according to PHE.

Nevertheless, from the modelling, audit checks and sensitivity analysis conducted by the EA it is expected there will be no exceedance of standards that protect public health. Public Health England is satisfied the currently available evidence indicates that the potential risks to public health from exposure to the emissions associated with such extraction are low if the operations are properly run and regulated. Noise and air quality assessments undertaken by the County Council and its specialist consultants indicate that potential risks to public health are low if the operations are properly run and regulated and which for land use planning purposes can be achieved by planning conditions and which are set out in the recommendation to this report.

Representations

The development has generated a significant number of representations the majority of which object to the proposal although there are a smaller number offering support for the proposal. The reasons for objecting and supporting the proposal are summarised in Appendix 2.

Up to the end of May 2015 a total of 18022 representations objecting to the proposal had been received, with 1062 duplicate letters from the same individuals. Most of these were in the form of generic template letters. 3013 of the objections were from within Fylde and this is 4.87% of the adult population (3.99% of the total population of Fylde) and 219 were from within a 2km radius of the site. 6862 of the representations were received from outside Lancashire. Many of the representations object to the principle of exploring for and placing future reliance on the use of hydrocarbons as a means of providing an energy resource and that investment and consequent employment opportunities would be better directed into renewable and more sustainable energy resources. There is further objection to the proposed methodology for the exploration of shale gas and the unacceptable impacts associated with such along with the localised impacts of the proposed development itself on the area, environment and communities.

A number of petitions have been received objecting to fracking in principle as well as the specific proposals the subject of this application and application LCC/2014/0101 at Roseacre Wood:

Friends of the Earth	7548
Friends of the Earth	23624 (Not 75,000 as reported on the front page to the petition)
Defend Lytham	924
Weeton St Michaels C of E Primary School	241
Roseacre, Wharles and Treales	192

217 representations in support have been received, mainly from economic bodies (e.g. Chambers of Commerce) that refer to the economic benefits that shale gas could bring.

Any further representations received following the finalisation of this report will be reported to the Committee at the meeting.

Some of the objections maintain that planning permission should not be granted in view of the alleged poor track record of the applicant when carrying out operations at other sites within its control however, this is not a material consideration.

The issues raised in representations have been addressed relative to the 'topic' areas that they have been summarised into and which are many. There is an assumption that the number of representations received assist in demonstrating the level of opposition and consequently the proposal should be refused. However, it is the issues raised rather than the number of representations received (this view has been supported in recent case law – see below) and it is considered that these have properly been addressed a part of the assessment of the application.

With regard to the applicants previous operations and compliance with planning permissions a planning permission goes with the land rather than with the applicant and it is right to assume that a developer would comply with conditions attached to any planning permission and develop and operate a site in accordance with all respective regulatory regimes.

Overview of cumulative and in combination effects

The applicant has undertaken an assessment of the cumulative effects associated with the individual elements of the technical topic areas covered in the ES along with an assessment of the cumulative effects of the proposed development at Roseacre Wood. They have also undertaken a review of current adopted land use plans and emerging local plans to identify and significant planned new development proposals in the vicinity of the site or along the key access routes to the site. The review has confirmed that there are no large development proposals for development in the vicinity of the site or nearby settlements so consequently there is limited scope for cumulative effects with other developments. There are other development proposals within 10km of the site although it is concluded that they are not likely to alter the scale of the effects of the proposal or create any new or additional effects. The applicant's current proposals at Grange Hill to pressure test an existing well are minor and should planning permission be granted, they would not contribute to any effect.

The conclusion drawn is that there would be no cumulative effects associated with the two sites operating in tandem (assuming planning permission is granted for the Roseacre Wood application) that the separation distance is sufficient such that

- Air quality, heritage, hydrogeological, seismic, water resources noise, visual and general disturbance impacts will not result in a cumulative effect. Likewise, the sites themselves are also separated enough from other development sites that these potential cumulative effects can be avoided;
- There is sufficient separation between the two sites so that their operations will not have a combined effect on the same settlements. Vehicles would use a different junction from the M55 and different local roads to access the Roseacre Wood site compared to those accessing the Preston New Road site; and
- The different activities that would be carried out at the two sites would be synchronised so that, for example, when hydraulic fracturing is occurring at one site a different activity, such as drilling, is occurring at the other site. This would further reduce the risk of any cumulative effects from occurring.
- The rate and quantity of flowback fluid generated from both this Site and Roseacre Wood could be managed using the mitigation measures proposed.
- Some of the impacts from the Project result in effects on more than one of the EIA topics including:
 - Air quality impacts on human beings and ecological receptors (nationally and internationally designated sites);
 - Visual impacts on the setting of heritage sites and assets (e.g. Listed Buildings and Registered Parks and Gardens);
 - Noise impacts on residential and ecological receptors; and
 - Lighting impacts on residential and ecological receptors.

Due to the distance between the Sites, the dispersed nature of residential properties, topography and landscape features no in-combination effects are predicted.

The applicant concludes that the EIA process has identified the foreseeable impacts arising from the Project, and assessed whether or not they are likely to result in significant effects. Where significant effects have been predicted measures to avoid or mitigate these effects, so that where possible they are no longer significant, have been identified. Additional mitigation measures to further reduce the magnitude of potential impacts have also been identified within the assessment. As a consequence of taking these measures the applicant considers that the only residual significant effects (following the identification of mitigation measures) are the:

- Temporary visual effects from the use of the taller pieces of equipment (e.g. the drilling rig and workover rig used during hydraulic fracturing).
- Temporary sky glow and building luminance effects from night time exploration activities.
- The short term use of the available waste treatment capacity, for flowback fluid, within 100 miles the proposed sites.
- It is considered that there would be no unacceptable cumulative effects associated with the development of the Preston New Road site or with the proposed Roseacre Wood site should planning permission be granted for that proposed development.

Conclusion

It was concluded in the previous report to the January Committee that the principle of shale gas exploration and appraisal is or could be made acceptable. This conclusion has not changed.

A number of groups and individuals continue to oppose the Governments reliance on hydrocarbons as a primary energy resource and more particularly their commitment to explore and appraise shale gas. The groups and individuals maintain their concerns about the principle and nature of shale gas exploration and appraisal in view of the potential it has to cause irreversible damage and ground contamination.

For land use planning purposes the proposal must be considered against national guidance and policy and local development plan policy. National guidance is clear that there will be some continued reliance on hydrocarbons for some time to come and that shale gas could assist in maintaining a diversity of energy supply without compromising targets for climate change. Consequently the objections to the principle of exploring and appraising shale gas reserves in principle cannot be supported and it is considered that to refuse the application on such grounds would not be sustainable. In principle therefore the exploration and appraisal of an indigenous natural resource that could contribute to a diverse range of national energy supplies is supported.

An assessment of the proposal has been carried out against the policies of the development plan for the area. It is considered that whilst the development could generate some impacts on air quality; archaeology and cultural heritage; greenhouse gas emissions; community and socio economics; ecology; hydrogeology and ground gas; induced seismicity (including subsidence); land use; landscape and visual amenity; lighting; resources and waste; water resources and public health; such

impacts would be low and could be mitigated and controlled by condition to an acceptable level and would also be controlled by other regulatory regimes and which the County Council could assume and be satisfied that such controls would be enforced by the respective bodies.

Whilst the operations would be temporary it is acknowledged that temporary would extend over a number of years as part of the exploration and appraisal stages. However, the phases are interspersed and would not generate impacts of the same level over a continuous period. The drilling operations would be interspersed with the hydraulic fracturing operations and the longer appraisal stage would not generate the same level of activity or impacts as the exploration phase. There is no certainty of the success of each phase in terms of identifying shale gas reserves of a quality and quantity that would provide for continued exploration or appraisal and prove to be viable for exploitation. It would therefore be inappropriate to come to a view on the acceptability or otherwise of the long term presence of the site at this stage. Any further development involving the retention of the site for an extended period would have to be the subject of a further planning application(s) and which would have to be considered on its own merits. As a consequence of the temporary period being over an extended period, there would be some visual impacts, most particularly from the physical presence of the site and the visual appearance of such when seen in passing by users of the public highway and constantly from some views when seen from the windows or grounds of the closest residential properties. However, it is considered that such views would only be in passing and be limited when seen by users of the public highway due to the presence of high hedges adjacent to the road and that views from the nearest properties would similarly be restricted to certain windows or vantage points in their grounds and which would not be so unacceptable as to constitute a sustainable reason for refusal, particularly given the additional mitigation proposed to attenuate noise, the use of a lower drill rig and the periodic use of the drill.

The proposed operations are most likely to generate some localised disturbance to the nearest residential properties at Staining Wood Cottages, Staining Wood Farm and Foxwood Chase associated with noise as part of the site development, drilling operations and hydraulic fracturing operations.

The increase in traffic associated with such works would be during the daytime working hours only and the existing highway network could accommodate the proposed increase in movements. It is considered that the noise associated with such would not be significantly greater than that associated with existing traffic flows. Noise associated with site development works would similarly only be during the day and would not lead to an unacceptable increase in noise over the existing background noise levels, particularly given the distance from the nearest sensitive properties. Noise from hydraulic fracturing operations would also only be during the day, and whilst raising noise levels, these would be for short durations and would not be raised to an unacceptable level compared to the existing background levels. Site development works, and hydraulic fracturing operations could be controlled by condition and restricted to day time hours and which would minimise the impact of such.

There would be more noise associated with the drilling operations which would be carried out on a 24 hour basis for an initial period of 5 months for the first borehole and then over three further three month periods for each of the subsequent three

proposed boreholes that would create most noise disturbance. The applicant initially advised that the predicted levels of night time noise would be reduced to the national guideline maximum limit (average over one hour) and which they have confirmed was the best reduction that could be achieved without onerous burdens. However, notwithstanding that the national guideline maximum limit (averaged over one hour) may be able to be achieved this would still have led to a significant increase in noise levels (12.5dB at Staining Wood Cottages) over and above existing background noise levels during the night.

The County Council initially commissioned its own noise survey which identified lower background levels at night than the applicant, indicating that there would be a greater increase in noise levels than predicted by the applicant. This level of disturbance would initially be for a period of 5 months associated with night time drilling operations after which it should cease but followed by three further three month periods interspersed with two month periods of hydraulic fracturing to facilitate the drilling of four boreholes.

Considerable concern had been expressed to such increases by residents, parish councils, interest groups, the Borough Council and the County Council's Director of Public Health. It was considered that such an increase over background levels at night for such periods over an extended period of 24 months would have a significant adverse effect on the health and quality of life and lead to an unacceptable loss of residential amenity to those residents at the nearest residential properties at Staining Wood Cottages, Staining Wood Farm and Foxwood Chase contrary to the national guidance and development plan policies. It was previously considered that such impacts would be unacceptable and it was recommended that planning permission be refused, but refused on this impact alone.

In light of the recommendation the applicant submitted further information in respect of noise and which included mitigation measures to achieve 39 dB L_{Aeq} at night, less than 10 dB above the modal background noise level, and which would not exceed the upper limit value of 42 dB $L_{Aeq,1h}$ as set out in national guidance. Given the extensive noise mitigation measures that would be implemented by the applicant, the predicted noise level of 39 dB L_{Aeq} might well be regarded as the minimum achievable without undue burden, although the applicant has stated achieving this level is onerous and goes beyond limits set in precedents in planning conditions.

The introduction of a night time noise source contributing 39 dB L_{Aeq} with no tonal or significant impulsivity would result in an increase in ambient noise level of less than 1 dB L_{Aeq} during the quietest parts of the night and which would hardly be perceptible.

The proposed noise mitigation measures are therefore considered to be practicable, and the claimed noise reductions achieved by each of the measures are based on guidance in International and British standards.

With the additional mitigation measures proposed by the applicant, it is considered that efforts have been made to reduce any adverse noise impacts that would arise from the drilling and hydraulic fracturing activities to a minimum. Furthermore, the resulting noise levels from the activities are considered to be in accordance with relevant government guidance.

The proposed development is therefore considered to be consistent with Policy DM2 of the JLMWLP and Policy EP27 of the Fylde Borough Local Plan. It has been satisfactorily demonstrated that noise impacts could be reduced to acceptable levels and would not result in harm to the amenity of neighbouring properties by way of noise pollution.

In terms of air quality it is concluded that the proposal would not generate any significant changes to air quality that would be a sustainable reason for refusing the proposal.

It is important to recognise that the planning application must be considered on its merits and in accordance with planning law. It is also important to accept that notwithstanding the criticism directed at the regulatory processes within which developments of this nature would be carried out there are other regulatory regimes (DECC, the HSE and the EA) that the County Council as planning authority must assume would operate in ways to control the developments within their remit and that the County Council must be satisfied that they would do such. In this case DECC, the HSE and the EA have advised that the development could only be carried out within their regulatory regimes and subject to their controls would be acceptable. In this respect the County Council can assume and be satisfied that this would be the case.

A planning authority's reliance on other (non-planning) regulatory bodies to provide the appropriate controls and conditions in relation to their statutory responsibilities was recently addressed in case law (December 2014) relating to a drilling site in West Sussex {R [on the application of Frack Free Balcombe Residents Association] v West Sussex County Council [2014] EWHC 4108 (Admin)}. Paragraph 102 of the judgment is particularly relevant to this issue:

“the existence of the statutory regimes applied by the HSE, the EA and the DECC shows that there are other mechanisms for dealing with the very proper concerns which the Claimant's members have about the effects on the environment. The Claimant and its members' concerns are in truth not with the planning committee's approach of relying on the other statutory regimes, but rather with the statutory bodies whose assessments and application of standards they disagree with. That does not provide a ground of legal challenge to the decision of the planning committee.”

In light of this judgment as well as NPPF guidance (Para 122) it is not necessary or appropriate to impose planning conditions or require an applicant to enter into a S.106 legal agreement with respect to matters, such as longer term monitoring, that are clearly within, and properly, the remit of other regulatory regimes and bodies.

It is therefore concluded that the principle of exploration and appraisal for shale gas would be acceptable and that in the proposed location impacts on air quality; archaeology and cultural heritage; greenhouse gas emissions; community and socio economics; ecology; hydrogeology and ground gas; induced seismicity and subsidence; land use; landscape and visual amenity; lighting; traffic; resources and waste; water resources or public health would be low, could be mitigated and controlled by condition to make them acceptable, or would be controlled by other regulatory regimes.

It is also concluded that the applicant has, by proposing additional noise mitigation measures to reduce the migration of noise from the site, including limiting the height of the drilling rig and enclosing the site and particular pieces of plant and equipment, reduced the predicted levels of noise to a level that falls below national guidance and WHO to a level that could be found acceptable when experienced at the closest residential properties at Staining Wood Cottages, Staining Farm and Foxwood Chase. Whilst it is accepted that some noise will be experienced during the day and may be at night, such levels of noise, if restricted to those levels proposed and which could be controlled by condition, would be acceptable and would protect the amenities of those residents for the purposes of the National Planning Policy Guidance on noise, Policy DM2 of the Joint Lancashire Minerals and Waste Local Plan – Site Allocation and Development Management Policies – Part One (LMWLP) and Policy EP27 of the Fylde Borough Local Plan.

It is therefore concluded that the proposal complies with national guidance regarding the exploration and appraisal for shale gas. Whilst there would be some negative impacts most particularly for those living in closest proximity to the site they would be for a temporary (albeit extended over a period of 6 years but with varying degrees of impacts dependant on the particular phase of operations during exploration and appraisal) period and could be made acceptable by planning condition. There is no evidence to demonstrate that the proposal would have a negative impact on tourism, culture, socio economic factors, agriculture or local employment opportunities; the proposal would bring benefits by establishing the presence and viability of exploiting an indigenous resource which could contribute to the national energy needs of maintaining a diverse energy supply and would bring some local benefits to the area in terms of employment and contributions to the local economy.

It is therefore considered that the proposal complies with the following policies of the development plan:

- CS1 of the LMWDF in that it safeguards Lancashire's mineral resources and meets a proven need.
- CS5 of the LMWDF in that it could be controlled to protect natural resources including water, air, soil and biodiversity from harm; would not adversely affect features and landscapes of historic and cultural importance and their settings; will not adversely contribute to fluvial flood risks or surface water flooding; would not have any long term unacceptable impact on the landscape; would not have unacceptable impacts on the amenity, health, economic well-being and safety of the population for which there would be high operating standards, sensitive working practices and environmental management systems that minimise harm and nuisance to the environment and local communities throughout the life of the development; would not adversely affect essential infrastructure and services to the public; could be acceptably restored.
- Policy NPPF 1 of the LMWLP in that a positive approach that reflects the presumption in sustainable development contained in the National Planning Policy Framework has been adopted and has sought to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions of the area in accordance with the policies of the development plan.

- DM2 of the LMWLP in that it has been demonstrated that all material, social, economic or environmental impacts that would cause demonstrable harm can be eliminated or reduced to acceptable levels by the use of planning conditions.
- Policy EP12 of the Fylde Local Plan in that trees and hedgerows will be protected.
- Policy EP15 of the Fylde Local Plan in that there would be no adverse impact on European nature conservation sites.
- Policy EP16 of the Fylde Local Plan in that there would be no adverse effect on national nature reserves.
- Policy EP17 of the Fylde Local Plan in that there would be no adverse effect on biological heritage sites.
- Policy EP23 of the Fylde Local Plan in that the risks of pollution of coastal waters, rivers, canals, lakes, ponds and other bodies of water would be minimised and protected by conditions.
- Policy EP24 of the Fylde Local Plan in that the risks of pollution of ground water would be minimised and protected by conditions or by other regulatory bodies.
- Policy EP26 of the Fylde Local Plan in that the proposal is would not be likely to give rise to unacceptable levels of air pollution or prejudice other adjacent or nearby communities or land uses and conditions could be imposed to minimise airborne emissions.
- Policy EP26 of the Fylde Local Plan in that the proposal is would not be likely to give rise to unacceptable levels of noise pollution and conditions could be imposed to minimise such.
- Policy EP26 of the Fylde Local Plan in that lighting could be controlled by condition and the impacts associated with such would be for a temporary period.

The proposal does not accord with Policy SP2 or EP11 of the Fylde Borough Local Plan as it would constitute industrial development in the countryside and is not one of the uses considered to be essentially required for the purposes of agriculture, horticulture or forestry; or other uses appropriate to a rural area, including those provided for in other policies of the plan which would help to diversify the rural economy and which accord with policy SP9 or include buildings of an acceptable design. However, policy SP2 does not take into account the minerals industry and which by its very nature could not comply with it. Given the limitations of the policy in this respect it is considered little weight should be attached to it when determining applications for minerals development and greater weight should be attached to the policies of the LMWDF and LMWLP. With regard to Policy EP11, this is more applicable to permanent development that would potentially have more impact on the landscape. The proposal is temporary and would not have the same long term impacts.

It is therefore concluded that other than policy SP2 and EP11 of the Fylde Local Plan the proposal accords with the policies of the development plan and the impacts would be over a temporary period and can be mitigated by conditions. It is therefore recommended that planning permission be granted for the reasons set out in the report and subject to the conditions set out in the recommendation below.

Equality Impact Assessment

As part of the decision-making process, under the Equality Act, public bodies must have due regard to the need to eliminate unlawful discrimination, harassment, victimisation and any other conduct prohibited by the Act; advance equality of opportunity between people who share a protected characteristic and people who do not share it; and foster good relations between people who share a protected characteristic and people who do not share it.

An Equality Impact Report is required in relation to this development to show how consideration of equality issues has influenced the decision-making process. This concluded that the development would not adversely affect those with 'protected characteristics'.

An assessment has been undertaken for the purposes of judging that the County Council has met its own requirements under the duty. The assessment has concluded that impact of the proposal can be mitigated so that they will not have a significant impact on groups with protected characteristics.

Human Rights

The proposal raises issues relating to the protection of amenity and property under Article 1 of the 1st Protocol of the Human Rights Act 1998.

The Human Rights Act requires the County Council to take into account the rights of the public under the European Convention on Human Rights and prevents the Council from acting in a manner which is incompatible with those rights. Article 8 of the Convention provides that there shall be respect for an individual's private life and home save for that interference which is in accordance with the law and necessary in a democratic society in the interests of (inter alia) public safety and the economic wellbeing of the country. Article 1 of protocol 1 provides that an individual's peaceful enjoyment of their property shall not be interfered with save as is necessary in the public interest.

For an interference with these rights to be justifiable the interference (and the means employed) needs to be proportionate to the aims sought to be realised. The main body of this report identifies the extent to which there is any identifiable interference with these rights. The planning considerations identified are also relevant in deciding whether any interference is proportionate. Case law indicates that certain development does interfere with an individual's rights under Human Rights legislation. This application as amended has been considered in the light of statute and case law and the interference would be considered to be proportionate if the proposal was to proceed.

The County Council has a duty to secure the proposed location and design of exploration and appraisal activities to protect the amenities of residents in the area as set out in the policies of the development plan. The proposal would conflict with certain policies of the development plan designed to achieve these aims although it is considered on the whole that where those conflicts arise there would be insufficient justification to interfere in the rights of the applicant and satisfactory controls could be imposed on the proposed development to protect the amenities of the residents to the nearest residential properties. It is considered that the public

interest can be safeguarded and subject to controls on noise there would be no significant adverse effects on the health and quality of life nor would it lead to an unacceptable loss of residential amenity to those residents at the nearest residential properties at Staining Wood Cottages, Staining Farm and Foxwood Chase.

Article 6 is the determination of an individual's civil rights and obligations. Article 6 provides that in the determination of these rights, an individual is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal. Article 6 has been subject to a great deal of case law. It has been decided that for planning matters the decision making process as a whole, which includes the right of review by the High Court, complied with Article 6.

Recommendation

That after taking into consideration the environmental information and further information, as defined in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 submitted in connection with the application, planning permission be granted subject to the following conditions:

Time Limits

1. The development hereby permitted shall be begun not later than 3 years from the date of this permission.

Reason: Imposed pursuant to Section 91 (1) (a) of the Town and Country Planning Act 1990.

2. The site development works comprising the drilling operations, flow testing, extended flow testing, decommissioning and site restoration shall be completed within a period of 75 months from the commencement of the development as defined by this planning permission. All the drilling operations and hydraulic fracturing operations shall be completed within a period of 30 months from the date of the commencement of either operations in accordance with condition 3.

Reason: To enable the County Planning Authority to monitor the development to ensure compliance with this permission and to conform with Policy CS5 of the JLMWDFCS DPD and Policy DM2 of the JLMWLP.

Working Programme

3. Written notification of each of the following phases of the development shall be provided to the County Planning Authority within 7 days of the commencement of each phase:
 - a) Construction of the site access and access road.
 - b) Site construction.
 - c) Installation of the interconnection to the gas pressure main and installation of the connection to the water main.
 - d) Drilling of each of the wells.
 - e) The first stage of the hydraulic fracturing of each of the wells.
 - f) Initial flow testing of each of the wells.
 - g) Extended flow testing for each of the wells.
 - h) Decommissioning of each of the wells.

- i) Decommissioning of the site operational compound including all the development incorporated in the land edged red on plan no. PNR-EN001 and including the removal of the interconnections to the gas and water grid.
- j) Restoration of the operational compound and the alignments of the removed interconnections to the gas and water grid.
- k) Removal of the access road.
- l) Reduction and reinstatement of the access to the original farm access dimensions and reinstatement of the adjoining hedgerows removed as part of the creation of the new access.

Reason: To enable the County Planning Authority to monitor the development to ensure compliance with this permission and to conform with Policy CS5 of the JLMWDFCS DPD, Policy DM2 of the JLMWLP.

4. The development shall be carried out, except where modified by the conditions to this permission, in accordance with the following documents:

- a) The letter, planning application, supporting statement and appendices received by the Director of Planning and Environment on 2nd June 2014 and the Further Information and Other Information advertised by the County Council on 11 December 2014 and the Further Information and Other Information submitted on 23 January 2015.
- b) Submitted Plans received by the Director of Planning and Environment on 2nd June 2014:

PNR-EW-001	Location Plan
PNR-EW-002	Location Plan: Surface works
PNR-EW-003	Parameter Plan
PNR-EW-004	Parameter Plan: Sections
PNR-EW-100	Indicative Site Layout: Construction
PNR-EW-101	Indicative Site Layout: Sections
PNR-EW-102	Indicative Site Layout: Drilling, Initial Flow Testing and Extended Flow Testing
PNR-EW-103	
PNR-EW-104	
PNR-EW-105	
PNR-EW-106	

- c) All schemes and programmes approved in accordance with this permission.

Reason: For the avoidance of doubt and to enable the County Planning Authority to control the development and to minimise its impact on the amenities of the local area and to conform with Policies CS1 and CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

5. A copy of this decision notice together with the approved plans and any details or schemes and programmes subsequently approved pursuant to this permission shall be kept at the site office at all times and the terms and contents thereof shall be made known to the supervising staff on the site.

Reason: To ensure the developer and site operatives are conversant with the terms of the planning permission.

Permitted Development Rights

6. The provisions of Part 17 of Schedule 2 of the **Town and Country Planning (General Permitted Development) (England) Order 2015** or any amendment, replacement, or enactment thereof are excluded and shall not apply to this development. Any development referred to in that part shall only be carried out pursuant to a planning permission granted under Part III of the Town and Country Planning Act 1990 or any amendment replacement or re-enactment thereof.

Reason: To maintain the County Planning Authority's control of the development and to safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

Highway Matters

7. No part of the development hereby approved shall commence until a scheme and programme for the construction of all site access works has been submitted to, and approved in writing by the County Planning Authority. The scheme and programme shall provide details of the construction of the access points to the main site access and to the occasional access for National Grid and shall include details of width of access, kerb radii, visibility splays retaining as much of the existing hedgerow as possible, fencing, gates, The approved site access works shall be completed prior to the commencement of the development of the site access road and compound.

Reason: In order to provide a safe access to the site that will not impact on the operation and safety of the A583 main carriageway and to conform with Policy DM2 of the JLMWLP.

8. No part of the development hereby approved shall commence until a scheme for the construction of the internal access road, has been first been submitted to, and approved in writing by the County Planning Authority. The scheme shall provide details of the soil stripping and storage, drainage, surfacing and shall provide for the surfacing of the access from Preston New Road to be in a permanent hard surface of tarmac for the first 20m The access road shall thereafter be constructed in accordance with the approved scheme prior to the commencement of any further parts of the development hereby approved.

Reason: In order to satisfy the County Planning Authority that the details of the highway access are acceptable before work commences on site, to provide a safe access to the site that will not impact on the operation and safety of the A583 main carriageway and to comply with and to conform with Policy DM2 of the JLMWLP.

9. No development shall commence until details of the location, design and specification of wheel-cleaning facilities and or other measures have been submitted to and approved in writing by the County Planning Authority to

prevent the tracking out of material or debris onto the public highway. Thereafter, the approved facilities and or measures shall be installed or applied and the wheel cleaning facilities shall be maintained in working order and be used by all Heavy Goods Vehicles leaving the site throughout the construction and restoration phases of the site to ensure that no debris from the site is deposited by vehicle wheels upon the public highway. Throughout the operational life of the site the access road shall be maintained in a way to prevent the tracking out of material or debris onto the public highway.

Reason: In the interests of highway safety (and to safeguard the amenity of local residents and adjacent properties/landowners and land users) and to conform with Policy DM2 of the JLMWLP.

10. No construction works shall commence on the site until a traffic management plan has been submitted to and approved in writing by the County Planning Authority. The traffic management plan shall include vehicle routeing to the site (from the M55); the use and control of other areas not part of the site that are expected to be used to hold any waiting vehicles at any stage; traffic management measures; times of access/egress; and emergency procedures on and off site. The traffic management plan shall be implemented as approved with links to monitored data and adhered to throughout the duration of the development.

Reason: To maintain the operation and safety of the local highway network during site preparation and construction with no waiting or parking on the public highway on the A583 corridor and to conform with Policy DM2 of the JLMWLP.

11. No development shall take place until a Construction Method Statement for the construction phase of the access and the site has been submitted to, and approved in writing, by the County Planning Authority. The Statement shall provide for:
 - a) The parking of all vehicles of site operatives and visitors (on site);
 - b) The loading and unloading of plant and materials;
 - c) The storage of plant and materials used in constructing the development;
 - d) The erection and maintenance of security hoarding;
 - e) Wheel washing facilities;
 - f) A management plan to control the emission of dust and dirt during construction identifying suitable mitigation measures;
 - g) A scheme for recycling/disposing of waste resulting from construction work (there shall be no burning on site);

The approved Statement shall be adhered to throughout the construction phase of the site.

Reason: To maintain the operation and safety of the local highway network during site preparation and construction and to conform with Policy DM2 of the JLMWLP.

12. **The** development hereby approved shall not commence until a scheme for the monitoring of background highway conditions which is evidence based i.e. photographic and its operation (including vehicle type, time, speed) at

appropriate locations that intercept all vehicles that access/egress the site has been submitted to and approved in writing by the County Planning Authority. The information to be collected as agreed and for traffic data to be continuously recorded. All information shall be provided to the County Planning Authority on a monthly basis, or otherwise agreed with the local highway authority in consultation with the planning authority. The information will inform the Traffic Management Plan and its operation or to support the necessary additional highway maintenance as a direct result of the proposal.

Reason: To maintain the operation and safety of the local highway network during site preparation, construction and operation and to conform with Policy DM2 of the JLMWLP.

Soils and Overburden

13. No movement of topsoil or subsoil associated with the construction of the access, compound and interconnections to the national gas and water grids or restoration of the site shall occur during the period from the 1st of October to the 30th April (inclusive) without the prior written consent of the County Planning Authority. At other times the stripping, movement and re-spreading of top and subsoils shall be restricted to occasions when the soils are dry and friable and the ground is sufficiently dry to allow the passage of heavy vehicles, plant and machinery over it without damage to the soils.

Reason: To ensure the proper removal, storage and replacement of soils to ensure satisfactory restoration and to conform with Policy DM2 of the JLMWLP.

14. All available topsoil and subsoil shall be stripped from any part of the access road, site compound and interconnections to the national gas and water grids before that part is excavated or is traversed by heavy vehicles, or before plant or machinery, or roads, buildings, plant yards or stores are constructed on it. All stripped topsoil and subsoil shall be stored in separate mounds within the areas identified on plan no PNR-EN-100 for their use in the restoration of the site.

Reason: To ensure the proper removal and storage of soils to ensure satisfactory restoration and to conform with Policy DM2 of the JLMWLP.

15. No topsoils or subsoils shall be exported from the site.

Reason: To ensure the proper removal and storage of soils to ensure satisfactory restoration and to conform with Policies CS1 and CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

16. All topsoil and subsoil mounds shall be graded and seeded within one month of their construction and thereafter retained in a grassed, weed free condition throughout the duration of the development pending their use in the restoration of the site.

Reason: To ensure the effective restoration of the site in the interests of the visual amenity of the area and to comply with policies CS1 and CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

17. All areas of the site left undisturbed, and all topsoil, subsoil, soil making material and overburden mounds shall be kept free from noxious weeds throughout the development including the restoration and aftercare periods.

Reason: In the interests of visual and local amenity and the local environment and to conform with policy CS1 and CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Hours of Working

18. No delivery or removal of materials, construction of the site access and compound, installation of the interconnections to the national gas and water grids, works associated with the delivery and removal of plant and equipment associated with all drilling and extended flow testing of gas monitoring works during the exploration and appraisal phases of the site and restoration works shall take place except between the hours of:

07.30 to 18.30 hours Mondays to Fridays (except Public Holidays)

08.30 to 12.00 hours on Saturdays (except Public Holidays)

No delivery or removal of materials construction of the site access and compound, installation of the interconnections to the national gas and water grids, works associated with the delivery and removal of plant and equipment associated with all drilling and extended flow testing of gas monitoring works during the exploration and appraisal phases of the site and restoration works shall take place at any time on Sundays or Public Holidays.

This condition shall not apply to the operations of drilling the boreholes and well operations or the use of pumping equipment, the carrying out of essential repairs to plant and equipment used on the site and the operational management of the drilling and extended flow testing operations.

Reason: In the interests of the amenities of the area and to conform with policy DM2 of the JLMWLP.

19. No hydraulic fracturing operations shall be carried out except between the hours of:

08.30 to 18.00 hours Mondays to Fridays (except Public Holidays)

No hydraulic fracturing operations shall be carried out on Saturdays, Sundays or Public Holidays.

Reason: In the interests of the amenities of the area and to conform with policy DM2 of the JLMWLP.

Safeguarding of Watercourses and Drainage

20. No development shall commence until a scheme to dispose of surface water from the access road and between the drill pad and Carr Bridge Brook to ensure the proposed development does not increase the risk of pollution to Carr Bridge Brook has been submitted to and approved in writing by the County Planning Authority. The approved scheme shall be implemented in full

prior to the importation of plant and equipment for the drilling operations and shall thereafter be retained and maintained throughout the operational life of the site.

Reason: To safeguard local watercourses and drainages and avoid the pollution of any watercourse or groundwater resource or adjacent land and to conform with Policies EP23 and EP24 of the Fylde Borough Local Plan Policy, Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

21. All surface water run-off retained on site during operations that cannot be disposed of to Carr Bridge Brook shall be taken off site in purpose designed tankers for off-site disposal at a licensed facility.

Reason: To safeguard local watercourses and drainages and avoid the pollution of any watercourse or groundwater resource or adjacent land and to conform with Policies EP23 and EP24 of the Fylde Borough Local Plan Policy, Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

22. All foul drainage shall be discharged to a public sewer or else to a sealed watertight tank fitted with a level warning device to indicate when the tank needs emptying. Upon emptying the contents of the tank shall be removed from the site completely.

Reason: To safeguard local watercourses and drainages and avoid the pollution of any watercourse or groundwater resource or adjacent land and to conform with Policies EP23 and EP24 of the Fylde Borough Local Plan Policy, Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

23. Buffer zones with a width of not less than 2m shall be maintained between the perimeter mounds or edge of the drilling compound and the site perimeter ditches within which there shall be no vehicle movements, storage of materials, excavation, or other construction activity.

Reason: To safeguard local watercourses and drainage of the site and to avoid the pollution of any watercourse or groundwater resource or adjacent land and to conform with Policies EP23 and EP24 of the Fylde Borough Local Plan Policy, Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

24. Any chemical, oil or fuel storage containers on the site shall be sited on an impervious surface with bund walls; the bunded areas shall be capable of containing 110% of the container or containers' total volume and shall enclose within their curtilage all fill and draw pipes, vents, gauges and sight glasses. There must be no drain through the bund floor or walls. Double skinned tanks may be used as an alternative only when the design and construction has been approved, in writing, by the County Planning Authority.

Reason: To safeguard local watercourses and drainages and avoid the pollution of any watercourse or groundwater resource or adjacent land and to conform with Policies EP23 and EP24 of the Fylde Borough Local Plan Policy,

Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Control of Noise

25. Prior to the commencement of development of the access and site and interconnections to the gas and water grid, a noise management plan shall be submitted to the County Planning Authority for approval in writing. The plan shall provide:
- a) Details of initial noise tests for each item of noise-emitting plant on site to establish whether noise emissions are compliant with conditions 27 and 28.
 - b) If not compliant, details of what mitigation would be introduced and timescales for implementation.
 - c) Details of instantaneous mitigation methods for each item of noise emitting equipment and any longer term mitigation.
 - d) Details of continuous monitoring procedure to monitor noise limits.
 - e) Procedures for addressing any complaints received.

The approved noise management plan shall be implemented in full throughout the operational life of the site including decommissioning and restoration.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

26. Prior to the commencement of development the developer shall submit in writing to the County Planning Authority details of a professionally recognised individual or body to be appointed to carry out noise monitoring in accordance with the requirements of conditions 27 and 28, such details to be confirmed as acceptable or otherwise in writing to the developer by the County Planning Authority within 21 days of the date of the submission. In the event the County Council finds the details unacceptable, the developer shall provide alternative details to address the County Council's reasons for finding the details unacceptable. The preferred individual body shall thereafter be appointed by the developer prior to the commencement of the development as defined by this planning permission and thereafter retained throughout the life of the development unless otherwise agreed in writing by the County Planning Authority.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

27. Prior to the commencement of development details of the monitoring methodology and equipment to be used shall be first submitted to the County Planning Authority for approval in writing. The methodology shall provide for the monitoring of noise to be carried out at a point to the rear edge of the pavement of the public highway (Preston New Road) public highway to the front of Staining Wood Cottages and at a point in between the site entrance to Preston New Road and the site itself and for the monitoring to be made available to the County Planning Authority to view on line at all times

throughout all phases of the development commencing from the construction of the access road and the site.

The monitoring shall thereafter be carried out in accordance with the approved methodology continuously on a 24 hour cycle from the date of commencement of development of the access and the site and thereafter throughout all development, operational and restoration phases of the site. The results of the monitoring shall include LA90 and LAeq noise levels, the prevailing weather conditions, details and calibration of equipment used for measurements and comments on other sources of noise which affect noise climate.

If the results indicate that the noise levels exceed those set out in conditions 27 and 28 the mitigation shall be implemented within 48 hours.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

28. During the hours of 0700 to 21.00 hours the specific noise level shall not exceed 55 dB Laeq(1 hour) (free field), when measured from the rear edge of the pavement of the public highway (Preston New Road) to the front of Staining Wood Cottages at a point closest to the noise source in a position to be first agreed with the County Planning Authority.

The noise from the site shall be free from prominent tones and impulses at Staining Wood Cottages. Prominent characteristics shall be evaluated according to Joint Nordic Method 2 set out in ISO 1996 -2 (BS4142 2014). A prominent tone or impulse shall be:

- a) A distinguishable, discrete, continuous note (whine, hiss, screech, hum etc) greater than ΔL_{ta} of 4 or more as defined in Joint Nordic Method 2 set out in ISO 1996 -2 (BS4142 2014).
- b) Distinct impulse noise (bangs, clicks, clatters or thumps) of greater than ΔL_{ta} of 6 as defined in Nordtest Method NT ACOU 112 (BS4142 2014).

Reason: To safeguard the amenity of local residents and to conform with Policy DM2 of the JLMWLP.

29. During the hours of 2100 to 0700 hours the specific noise level shall not exceed 39 dB Laeq(1 hour) (free field), when measured from the rear edge of the pavement of the public highway (Preston New Road) to the front of Staining Wood Cottages at a point closest to the noise source in a position to be first agreed with the County Planning Authority.

The noise from the site shall be free from prominent tones and impulses at Staining Wood Cottages. Prominent characteristics shall be evaluated according to Joint Nordic Method 2 set out in ISO 1996 -2 (BS4142 2014). A prominent tone or impulse shall be:

- a) A distinguishable, discrete, continuous note (whine, hiss, screech, hum etc) greater than ΔL_{ta} of 4 or more as defined in Joint Nordic Method 2 set out in ISO 1996 -2 (BS4142 2014).

- b) Distinct impulse noise (bangs, clicks, clatters or thumps) of greater than ΔL_{Ta} of 6 as defined in Nordtest Method NT ACOU 112 (BS4142 2014).

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

30. Vehicles, plant and machinery within the control of the applicant, including those required to visit the site under contract that are required to emit reversing warning noise, shall only use white noise/broadband alarms rather than single tone alarms.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

31. All plant, equipment and machinery used in connection with the operation and maintenance of the site shall be equipped with effective silencing equipment or sound proofing equipment to the standard of design set out in the manufacturer's specification and shall be maintained in accordance with that specification at all times throughout the development.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

Air Quality and Dust

32. Prior to the commencement of development the developer shall submit in writing to the County Planning Authority details of a professionally recognised individual or body to be appointed to carry out dust monitoring in accordance with the requirements of condition 33, such details to be confirmed as acceptable or otherwise in writing to the developer by the County Planning Authority within 21 days of the date of the submission. In the event the County Council finds the details unacceptable, the developer shall provide alternative details to address the County Council's reasons for finding the details unacceptable. The preferred individual body shall thereafter be appointed by the developer prior to the commencement of the development as defined by this planning permission and thereafter retained throughout the life of the development unless otherwise agreed in writing by the County Planning Authority.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

33. Prior to the commencement of development, a detailed dust management plan for the access and site construction, interconnections to the national gas and water grids and restoration of the site and access phases of the site shall be submitted to the County Planning Authority for approval in writing. The dust management plan shall include details of the equipment to be used, location of such equipment, details of how dust is to be monitored and the results to be made available to the County Planning Authority. Monitoring shall be carried

out and the results of such shall be submitted in writing to the County Planning Authority in accordance with the approved management plan. No activity including the development of the site access, site, interconnections to the national gas and water grids and restoration of the site and access phases shall cause dust to be emitted so as to adversely affect the amenities of nearby residential properties and/or other sensitive uses and/or local environment. Should such an emission occur, the activity shall be suspended until a revised dust management plan is submitted to and approved by the County Planning Authority. The approved dust management plan shall be adhered to throughout the development of the access and site construction, interconnections to the national gas and water grids and restoration of the site and access phases of the site and restoration phases of the site.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy DM2 of the JLMWLP.

Lighting

34. No development shall commence until a scheme and programme for the lighting/floodlighting of the site has been submitted to the County Planning Authority and approved in writing. The scheme and programme shall include details of:

- a) Type and intensity of lights
- b) Types of masking or baffle at head
- c) Type, height and colour of lighting columns
- d) Location, number and size of lighting units per column
- e) Light spread diagrams showing lux levels at the site boundary and calculation of the impact of these on nearby residential properties
- f) Phasing of the implementation of the approved scheme relative to the phases of development to ensure the minimum lighting necessary is employed throughout the respective phases.

Thereafter the floodlighting shall be erected and operated in accordance with the approved scheme and programme throughout the operational life of the site.

Reason: To safeguard the amenity of local residents and adjacent properties/landowners and land users and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Controls over buildings/plant

35. No development shall commence until details of the colours of the external cladding or finish of the buildings, fencing, floodlighting columns, cladding to plant and machinery (including the drill rig and fracking equipment) and solid noise attenuative measures to plant and equipment (including the drill rig and fracking equipment) have been submitted to and approved in writing by the County Planning Authority. The details shall provide for the colour finish of the buildings, fencing, floodlighting columns, cladding to plant and machinery and solid noise attenuative measures within the control of the developer that would be seen above the 4m high screening mounds or solid noise attenuative

measures to be a single or combination of browns, greens and greys. The buildings, fencing, floodlighting columns, cladding to plant and machinery and solid noise attenuative measures within the control of the applicant shall be painted in the approved colours prior to or within 2 weeks of their arrival on site and thereafter maintained in the same colour(s) throughout their presence on the site with the exception of plant and equipment required for short durations associated with well operation activities.

Reason: To protect the visual amenities of the area and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

36. The drill rig and any other similar plant and equipment associated with the drilling of the boreholes, hydraulic fracturing and management and monitoring of the boreholes shall not exceed a height of 36m as measured from site compound ground level unless otherwise agreed in writing by the County Planning Authority.

Reason: To protect the visual amenities of the area and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Security measures

37. Prior to the commencement of development, a scheme of any additional security measures shall be submitted to and approved in writing by the County Planning Authority. The scheme shall identify the height, location, appearance of any fencing and other security measures which may be required to be installed on the site. It shall not include fencing of more than 4.5m in height or 2m in height fronting the highway. Only security measures approved in the approved scheme shall be erected on the site. Any security measures installed shall be removed on completion of the development.

Reason: To ensure the site can be appropriately secured without significant impact on the landscape of the area and to conform with Policy DM2 of the JLMWLP.

Ecology

38. Prior to the commencement of development, a method statement for the protection of wildlife, flora and fauna during construction and during the operational life of the site shall be submitted to and approved in writing by the County Planning Authority.

Reason: To protect the ecology of the area and to comply with Policy DM2 of the JLMWLP.

39. Not later than one year before the decommissioning of the site, an ecological survey shall take place to establish the presence, or otherwise, of any protected species on the site within the site boundary and immediately outside the site boundary. The survey and measures for the protection of and minimisation of disturbance during the decommissioning phase shall be submitted to the County Planning Authority for approval in writing. The decommissioning of the

site shall be implemented strictly in accordance with the approved details of protection.

Reason: To protect the ecology of the area and to comply with Policy DM2 of the JLMWLP.

40. No trees or hedgerows shall be removed during the bird-breeding season between 1 March and 31 July inclusive unless they have been previously checked and found clear of nesting birds in accordance with Natural England's guidance and if appropriate, an exclusion zone set up around any vegetation to be protected. No work shall be undertaken within the exclusion zone until birds and any dependant young have vacated the area.

Reason: To protect nesting birds and to conform with Policy DM2 of the JLMWLP.

Landscaping

41. No development shall commence until a scheme and programme for the landscaping of the site has been submitted to and approved in writing by the County Planning Authority. The scheme and programme shall include details of:

- a) The location and dimensions of screening mounds and planting belts.
- b) details for the planting of trees and shrubs including numbers, types and sizes of species to be planted, location and layout of planting areas, protection measures and methods of planting.
- d) Details for the seeding of any landscaping areas including mixes to be used and rates of application.
- e) Details for the management of any landscaping areas including maintenance of tree and shrub planting and grazing or mowing of grassland areas.

42. The approved landscaping works shall be undertaken in the first planting season following the commencement of the development and shall thereafter be maintained for a period of five years including weed control, replacement of dead and dying trees and maintenance of protection measures.

Reason: In the interests of visual and local amenity and the local environment and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

43. All hedges and trees forming part of the site boundaries or to be retained within the site shall be protected from any damage and maintained throughout the development (and aftercare period).

Reason: In the interests of visual and local amenity and the local environment and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Archaeology

44. No development shall commence until a scheme and programme for archaeological work in accordance with a written scheme of investigation has been submitted to and approved in writing by the County Planning Authority. The archaeological work contained in the approved scheme shall be undertaken during all soil stripping exercises.

Reason: In the interests of archaeological investigation and to conform with, policies with DM2 of the JLMWLP.

Restoration

45. Restoration shall be carried out in accordance with the following:
- a) All plant, buildings, hard standings and aggregates/ hard-core including the access and access road and interconnections to the national gas and water grid shall be removed from the land.
 - b) The upper layers of the subsoil material shall be subsoiled (rooted) to a depth of 600mm with a heavy-duty subsoiler (winged) prior to the replacement of topsoils to ensure the removal of material injurious to plant life and any rock, stone, boulder or other material capable of preventing or impeding normal agricultural land drainage operations, including mole ploughing and subsoiling.
 - c) Following the treatment of the subsoil, topsoil shall be placed over the site to a minimum depth of 150mm and shall be ripped, cultivated and left in a state that will enable the land to be brought to a standard reasonably fit for agricultural use.

Reason: To secure the proper restoration of the site and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

46. The access shall be reduced to a single agricultural access in accordance with a scheme to be first submitted to the County Planning Authority for approval in writing. The scheme shall provide for the reduction of the access and kerb radii to a single access width and the fencing of the frontage and reinstatement of the hedgerows to the frontage of Preston New Road. The scheme shall include details of the species, numbers and spacing's of the hedgerow to be planted and the means of protection.

Reason: To secure the proper restoration of the site and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

47. The hedgerow to be planted to the frontage of Preston New Road shall be undertaken in the first planting season following the reduction of the access in accordance with the approved details under the provisions of condition 41 and shall thereafter be maintained for a period of five years including weed control, replacement of dead and dying trees and maintenance of protection measures in accordance with the requirements of condition 44.

Reason: To secure the proper restoration of the site and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Aftercare

48. Within 3 months of the certification in writing by the County Planning Authority of the completion of restoration, as defined in this permission, a scheme and programme for the aftercare of the site for a period of five years to promote the agricultural afteruse of the site shall be submitted to the County Planning Authority for approval in writing. The scheme and programme shall contain details of the following:
- a) Maintenance and management of the restored site to promote its agricultural use.
 - b) Weed control where necessary.
 - c) Measures to relieve compaction or improve drainage.
 - d) Maintenance of the replacement hedgerow planting including replacement of failures, weed control and re-staking works.
 - e) An annual inspection to be undertaken in conjunction with representatives of the County Planning Authority to assess the aftercare works that are required in the following year.

Reason: To secure the proper aftercare of the site and to conform with Policy CS5 of the JLMWDFCS DPD and Policies NPPF 1 and DM2 of the JLMWLP.

Definitions

Commencement of development: commencement of development for the purposes of this planning permission is the construction of the access to the A583.

Completion of Restoration: The date when the Director of Strategic Planning and Transport certifies in writing that the works of restoration have been completed satisfactorily.

Heavy goods vehicle: a vehicle of more than 7.5 tonnes gross weight.

Drilling Operations: the drilling of an exploratory borehole necessary to test for the presence of hydrocarbons.

Planting Season: The period between 1 October in any one year and 31 March in the following year.

Acronyms

JLMWDFCS DPD - Joint Lancashire Minerals and Waste Development Framework Core Strategy Development Plan Document

JLMWLP - Joint Lancashire Minerals and Waste Local Plan - Site Allocation and Development Management Policies - Part One

Notes

1. The grant of planning permission does not entitle a developer to obstruct a right of way and any proposed stopping-up or diversion of a right of way should be the subject of an Order under the appropriate Act.
2. The grant of planning permission will require the applicant to enter into an appropriate Legal Agreement with the County Council as Highway Authority. The Highway Authority hereby reserves the right to provide the highway works within the highway associated with this proposal. Provision of the highway works includes design, procurement of the work by contract and supervision of the works. The applicant should be advised to contact the Environment Director at County Hall, Preston PR1 0LD, in the first instance, to ascertain the details of such an agreement and the information to be provided.
3. Traffic Regulation Orders, diversions of Public Rights of Way, Stopping Up of existing highway, changes to public transport scheduling/routing and other activities require separate statutory consultation processes beyond the planning application process. The applicant will be obliged to meet all the costs associated with these of works and ensure that any works which rely upon them do not commence until all legal processes have been satisfactorily completed.
4. This consent requires the construction, improvement or alteration of an access to the public highway. Under Section 184 of the Highways Act 1980, the County Council, as Highway Authority, must specify the works to be carried out. Only the Highway Authority or a contractor approved by the Highway Authority can carry out these works. Before any works to the access commence you should contact the Area Manager (Public Realm) [address and telephone number below] quoting the planning permission reference:

Area Manager (Public Realm) North: Hampson Lane, Hampson Green, Galgate, Lancaster LA2 OH7 Tel: 01524 752290
5. The grant of planning permission does not remove the need to obtain the relevant statutory consents/licences from the Environment Agency.

**Local Government (Access to Information) Act 1985
List of Background Papers**

Paper	Date	Contact/Directorate/Ext
LCC/2014/0096	02/06/2014	Stuart Perigo/Dev Management/531948
LCC/2014/0097	02/06/2014	
LCC/2014/0101	16/06/2014	
LCC/2014/0102	16/06/2014	

Reason for Inclusion in Part II, if appropriate

N/A

