

**RYEDALE DISTRICT COUNCIL
PLANNING COMMITTEE**

SCHEDULE OF ITEMS TO BE DETERMINED BY THE COMMITTEE

PLANS WILL BE AVAILABLE FOR INSPECTION 30 MINUTES BEFORE THE MEETING

Application No: 15/00971/CPO
Parish: Kirby Misperton Parish Council
Appn. Type: Consultation with County Planning
Applicant: Third Energy UK Gas Ltd
Proposal: To hydraulically stimulate and test the various geological formations previously identified during the 2013 KM8 drilling operation, followed by the production of gas from one or more of these formations into the existing production facilities, followed by wellsite restoration. Plant and machinery to be used includes a workover rig (maximum height 37m) hydraulic fracture equipment, coil tubing unit, wireline unit, well testing equipment, high pressure flowline, temporary flowline pipe supports, permanent high pressure flowline and permanent pipe supports
Location: Land At Alma Farm Kirby Misperton Malton North Yorkshire
Registration Date: 19 August 2015 **8/13 Week Expiry Date:** 9 September 2015
Case Officer: Gary Housden **Ext:** 307

CONSULTATIONS:

Neighbour responses: Mr Simon Sweeney,
Overall Expiry Date:

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INTRODUCTION

Members will recall that the Council's response to this planning application was deferred at the November meeting following the receipt of further information from North Yorkshire County Council in response to further information received from the applicant under Regulation 22 of the E.I.A Regulations 2011.

Members are requested to refer to their agenda papers for the 10th November 2015 meeting. However, for ease of reference the earlier text of the officer report is appended for ease of reference.

In response to the Regulation 22 request the County Council received for following additional information which is detailed below:-

- Regulation 22 response;
- Echo Barrier technical sheet;
- Echo Barrier scaffold barrier example;
- Load weights for the vehicle movements as set out in the planning application;

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1 December 2015

- Figure 1: Source Protection Zones;
- Figure 2: Regional Bedrock Geology;
- Figure 3: Geological Cross Section;
- DRaW: Drawing No. 01/06/001 Additional Planting and Landscape Maintenance;
- AECOM: Biodiversity Enhancement and Management Plan;
- Updated Traffic Management Plan;
- AECOM: Bat Survey Timings; and
- Figure 6.1: Completion String and Hydraulic Fracture Design (Sized to AO).

A number of minor amendments were made to documents that were also submitted in support of the planning application. These documents are:

- Planning Application (Appendix 18) and Environmental Statement Technical Appendix 15: Amended waste management plan (TE-EPRA-KM8-WMP-005 Revision 2);
- Planning Application (Appendix 6) and Environmental Statement (Appendix 1: Air Quality Impact Assessment Revision 10);
- Planning Application (Appendix 7): Air Quality Monitoring Plan Revision 2; and
- Planning Application (Appendix 15) and Environmental Statement Technical Appendix 12: Amended Seismicity - Monitoring of the Subsurface (page numbers and metric units only).

It is of note that to date nothing further has been received in respect of the impact of the development on both designated and non-designated heritage assets - a matter which is referred to in the earlier officer report from the November meeting. Both of these issues are referred to in a further letter from the Head of Planning Services to the applicant's agent dated 17th November 2015. It is suggested in that letter that further information in respect of the Grade II listed bridge over Costa Beck and a desk based analysis to assess the impact of the development on non-designated assets of historic value may be being submitted for further consideration. However, at the time of writing this report to Members no further information has been received.

(A copy of the letter dated 17th November 2015 is appended to this report)

Assessment

In terms of the additional information received the following comments are made.

Tree and Landscape Officer

No further comments in respect of the additional planting and landscape management plan.

Countryside Management Officer

Original Comments

"I am satisfied with the level of survey and the conclusions concerning risk of impacts to protected species or habitats on site and some suitable ecological enhancement measures have been included .

The potential for harm through leakage of flow back fluid into nearby watercourses to protected species and habitats away from the site (such as the Derwent SAC and SSSI) hinges on the effectiveness of the existing bund and the bore hole to retain the fluid. I would urge that some monitoring of watercourses before, during and after the operation of the site is undertaken to give some quantitative data on this question.

The NYCC ecology consultation statement mentions that they are going to carry out a HRA but I could not find this document".

The further information submitted in respect of ecological matters remains under consideration and Members will be advised of the Countryside Management Officers' views on the late pages.

Environmental Health Officer

The Head of Planning Services at North Yorkshire County Council (NYCC) issued a letter to the applicant on 11 October requiring further information under Regulation 22 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, that required the County Planning Authority to advertise, consult and make available for comment by any interested party for a period of not less than 21 days. Other matters were also included in the letter that required further clarification. I do not propose to repeat these in this consultation response. Information has subsequently been sent to NYCC, and allowing for a 21 day consultation period, the period is due to end on 25 November 2015. The Head of Planning Services at NYCC has subsequently written to the applicant on 17 November 2015, requesting a further time extension of time and raising further concerns arising from the content of the response of the Regulation 22 request.

NOISE

Policy

General

The National Planning Policy Framework (NPPF) (DCLG 2012) states in Paragraph 109 that as well as other listed criteria the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risks from, or being adversely affected by unacceptable levels of soil, air water or noise pollution or land instability. Paragraph 120 states that to prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location. The effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or proposed development to adverse effects from pollution, should be taken into account.

Paragraph 122 advises that local planning authorities should focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes. Local planning authorities should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.

Noise policies

Paragraph 123 of the NPPF states that Planning policies and decisions should aim to:

- *Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;*
- *Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;*
- *Recognise the development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established, and*
- *Identify and protect areas of tranquility which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.*

The term “significant adverse impacts” and “adverse” are explained in the Noise Policy Statement for England (Defra 2010).

Further *Planning Practice Guidance: Noise* was issued in 2014 further explaining the concepts of adverse effects to noise, following on from their introduction in the Noise Policy Statement for England (NPSE) and providing further general guidance on planning and noise. The Guidance advises that noise can override other planning concerns but that neither the Noise Policy Statement for England nor the NPPF (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separate from the economic, social and other environmental dimensions of proposed development.

In addition to the generic guidance on noise there is the *Planning Practice Guidance: Minerals (PPGM) (DCLG 2014)* which supersedes the previous Technical Guidance to the National Planning Policy Framework (2012), which contained guidance on minerals and noise. In relation to noise emissions the PPGM states that

“Those making mineral development proposals, including those for related similar processes such as aggregates recycling and disposal of construction waste, should carry out a noise impact assessment which should identify all sources of noise and, for each source, take account of the noise emission, its characteristics, the proposed operating locations, procedures, schedules and duration of work for the life of the operation, and its likely impact on the surrounding neighbourhood.

Proposals for the control or mitigation of noise emissions should:

- *consider the main characteristics of the production process and its environs, including the location of noise-sensitive properties and sensitive environmental sites;*
- *assess the existing acoustic environment around the site of the proposed operations, including background noise levels at nearby noise-sensitive properties;*
- *estimate the likely future noise from the development and its impact on the neighbourhood of the proposed operations;*
- *identify proposals to minimise, mitigate and remove noise emissions at source;*
- *monitor the resulting noise to check compliance with any proposed or imposed conditions*

The PPGM continues by advising that mineral planning authorities should determine the impact of noise by taking into account the prevailing acoustic environment and in so doing so consider whether or not noise from the proposed operations would:

- *give rise to significant adverse effect;*
- *give rise to an adverse effect; and*
- *enable a good standard of amenity to be achieved*

In line with the explanatory Note of the Noise Policy Statement for England, this would include identifying whether the overall effect of the noise exposure would be above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation

Guidance on **What are appropriate noise standards for mineral operators for normal operations?** is given: in Paragraph 21

Mineral planning authorities should aim to establish a noise limit, through a planning condition, at the noise-sensitive property that does not exceed the background noise level ($L_{A90,1h}$) by more than 10dB(A) without imposing unreasonable burdens on the mineral operator, the limit set should be as near that level as practicable. In any event, the total noise from the operations should not exceed 55dB(A) LAeq, 1h (free field). For operations during the evening (1900-2200) the noise limits should not exceed the background noise level ($L_{A90,1h}$) by more than 10dB(A) and should not exceed 55dB(A) LAeq, 1h (free field). 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.

Where the site noise has a significant tonal element, it may be appropriate to set specific limits to control this aspect. Peak or impulsive noise, which may include some reversing beepers, may also require separate limits that are independent of background noise (e.g. Lmax in specific octave or third-octave frequency bands – and that should not be allowed to occur regularly at night.)

Care should be taken, however, to avoid any of these suggested values being implemented as fixed thresholds as specific circumstances may justify some small variation being allowed.

Paragraph 22 provides guidance on **What type of operations may give rise to particularly noisy short-term activities and what noise limits may be appropriate?**

Activities such as soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of site road construction and maintenance.

Increased temporary daytime noise limits of up to 70dB(A) LAeq 1h(free field) for periods of up to eight weeks in a year at specified noise-sensitive properties should be considered to facilitate essential site preparation and restoration work and construction of baffle mounds where it is clear that this will bring longer-term environmental benefits to the site or its environs.

Where work is likely to take longer than eight weeks, a lower limit over a longer period should be considered. In some wholly exceptional cases, where there is no viable alternative, a higher limit for a very limited period may be appropriate in order to attain the environmental benefits. Within this framework, the 70dB(A) LAeq 1h(free field) limit referred to above should be regarded as a maximum.

Ryedale Local Plan (2013) – SP20

Character

Proposed uses and activity will be compatible with the existing ambience of the immediate locality and the surrounding area and neighbouring land uses and would not prejudice the continued operation of existing neighbouring land uses.

Amenity and Safety

New development will not have a material adverse impact on the amenity of present or future occupants, the users or occupants of neighbouring land and buildings or the wider community by virtue of its design, use, location and proximity to neighbouring land uses. Impacts on amenity can include, for example, noise, dust, odour, light flicker, loss of privacy or natural daylight or be an overbearing presence.

Developers will be expected to apply the highest standards outlined in the World Health Organisation, British Standards and wider international and national standards relating to noise.

This must be set in the context that Ryedale District Council are consultees on this application and the application will be determined by the County Planning Authority.

Assessment

The Environmental Statement contains a noise assessment, which outlines the potential impact of the development with respect to noise. The assessment seeks to determine the potential noise impact on the community by comparing predicted levels against the appropriate guidance and assessing it with regard to significance. The assessment acknowledges that in some cases there is clear guidance as to what might constitute a significant impact, in other cases, interpretation and further evaluation is required before being able to draw conclusions on the significance of the predicted impact.

The assessment includes details of the relevant planning policies and other noise standards and guidance. The consultant when discussing the standards in the Planning Practice Guidance – Minerals, states that the noise limits within paragraph 21 only apply for normal mineral operations. The term is not defined, but the consultant's interpretation is that this would mean the period when the mineral asset is actually being extracted and implies a relatively long period as the limits for noise are relatively low and does not believe that they should apply to short term periods associated with site preparation and construction of facilities, both of which would be shorter term. Paragraph 22 which covers short term noisy activities such as soil-stripping, construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of site road construction and maintenance, provides for much greater noise levels of up to 70 db(A) $L_{Aeq,1hF}$ (free field) for periods of up to eight weeks of the year at specified noise-sensitive premises. The paragraph however fails to mention the construction of any permanent facilities that might be associated with normal long term mineral extraction or its applicability to such activities as proposed. The consultant believes that as the 24 hour/day pre-stimulation workover activity and daytime hydraulic fracturing are both limited in time and are not long term mineral extraction activities, that paragraph 22 is relevant to both activities as is BS 5228-1, Code of practice for noise and vibration control on construction and open sites.

The assessment methodology refers to the baseline noise study which was undertaken to establish existing noise levels within the area of the proposed development and to allow comparisons with the change in noise level. Different assessment thresholds have been established for each phase of the development, based upon the Significant Observed Adverse Effect Level (SOAEL) and these are compared with predicted levels. The Lowest Observed Adverse Effect Level (LOAEL) values are lower than SOAEL values and the consultant acknowledges that there is a general obligation for the applicant to achieve lower levels close to the LOAEL, taking into account the economic and social benefit of the activity causing the noise and that design mitigation should be considered during all phases in order to seek to move towards LOAEL. The assessment methodology derives a variety of assessment thresholds considered relevant for each category of noise impact, which are summarised in Table 16.6 of the Noise Assessment.

I agree with the consultants statement that the objective of the noise mitigation strategy is to achieve levels better (lower) than SOAEL values and approach LOAEL values wherever it is reasonably practicable to do this in line with the Noise Policy Statement for England (NPSE) and Planning Policy Guidance (PPG).

It is proposed to mitigate the impact of the development to nearby residents by design of the equipment, limiting hydraulic fracture stimulation (the noisiest of the operations) to daytime and by the installation of 8.7m screening barriers that have been designed to ensure the optimum mitigation. Paragraph 16.8.1 of the Environmental Statement advises that in addition to the 8.7m high shipping containers that on the inside surface of containers, facing inwards to the equipment, will be loosely draped a tarpaulin material set around 100m clear of the container face, to provide some sound absorption characteristic and reduce reflections. It is also stated that "*Alternative noise barriers are still being explored with the aim of reducing vehicle movements associated with the mobilisation and demobilisation of the noise barrier. In any event, the noise barrier used will be equal to or more effective in providing noise reduction at the KMA wellsite during the pre-stimulation workover and hydraulic fracture stimulation/well test phase.*" The barrier has a beneficial effect for all potential noise sensitive receptors. It has been identified by the Head of Planning Services of NYCC that these would have to be high cube containers as oppose to standard ISO shipping containers to achieve the stated height. In addition further information was sought by NYCC under Regulation 22 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, regarding paragraph 6.1.1 on page 38 of the Planning Statement, which includes reference to "*alternative noise attenuation systems are currently being considered*". Information has now been provided that "*An alternative noise barrier system proposed for the KM8 hydraulic fracturing operation is an Echo Barrier acoustic screen system, which consists of Echo Barrier acoustic screens erected on a scaffold framework. The Echo Barrier Screens are high performance, waterproof acoustic absorption panels, which together with the scaffolding, provide an easily reconfigured system to optimise noise attenuation. In the event that noise monitoring identifies further requirement for noise attenuation additional Echo Barrier panels can be*

added to provide the required attenuation.

HGV movements associated with the Echo Barrier System are approximately 68 individual HGV movements to mobilise and demobilise. When compared to the ISO container system, which requires 156 individual HGV movements to mobilise and demobilise, the Echo Barrier System represents a significant reduction in HGV movements, whilst maintaining an equally effective noise barrier."

All the noise predictions have been based on the proposed 8.7m barrier, the proposals for a new barrier provide no details as regards their use at the application site or any noise assessment as to their effectiveness. There is no evidence provided as to if the new barrier would prove equally or more effective as the original proposed barrier. This view is reinforced by the statement in the letter from the Head of Planning, NYCC, to the applicant dated 17 November 2015.

A further way to minimise disturbance is to avoid the development over the summer months when people are more likely to utilise their gardens, when visitors are using the nearby campsite or residents sleep with their windows open. Whilst the assessment acknowledges this, it states that the applicant will seek to undertake the pre-stimulation workover and hydraulic fracture stimulation during the autumn and winter season, however the timing of the operation is dependent upon receipt of planning consent, the issuing of Environmental Permits and availability of equipment.

Noise monitoring is also proposed during the operations identified as likely to cause the most disturbance, the pre-stimulation workover, hydraulic stimulation/well test phase and restoration.

The Impact Assessment predicts and assesses the noise generated from activities associated with the proposed development for each of the phases of work.

Pre-stimulation workover

The pre-stimulation workover will extend over 2 weeks and will be continuous over this period day and night. Predicted levels at the identified noise sensitive receptors (NSR's) with the noise barrier in place range between 31-46dB(A) $L_{Aeq,1hr}$. Measured pre-existing daytime ambient levels are however 52dB(A) $L_{Aeq,1hr}$, mainly due to traffic and milking equipment associated with the farm, but reducing to 30dB(A) $L_{Aeq,1hr}$ at night-time. The predicted levels with the barrier in place are effective at reducing noise except in the southerly direction to Kirby O Carr, where there is only a partial barrier. The prediction is made however assuming the worse case scenario, that the rig engine will be operating continuously during the 1 hour assessment period, whereas, it is stated that in practice it will be working for no longer than 50% of the time which should reduce the quoted level by a further 3dB. In addition it advises that at detailed design stage that it may be possible to extend the partial south section of the barrier further west to reduce the impact on this property. The most sensitive period during this activity is the night time period and the predicted levels for Alma Farm and Shire Grove are considered satisfactory. In relation to Kirby O Carr the levels are predicted to be on the range 43-46 dB(A) $L_{Aeq,1hr}$ depending upon the on-times of the workover rig. The consultant concludes that due to the predicted and limited time period the effect is considered insignificant. For Kirby O Carr, the predicted levels for night time are 12-15 dB above existing background levels. The levels are on the threshold of acceptable standards and not considered as insignificant but having regard to the two weeks duration of the activity, are considered as acceptable. I would however wish to see if the noise barrier could be extended to mitigate further at this property, which would also assist at the hydraulic fracture stimulation phase and as such I have suggested a condition requiring a resubmitted scheme for noise mitigation, to take this into account.

Hydraulic Fracture Stimulation/Well Test

This phase follows the pre-stimulation workover and will extend over 6 weeks, during which the main potentially significant noise generating activity will be the hydraulic fracture stimulation, which will be undertaken for a period of up to five(5) hours on five(5) separate occasions during the first five (5) weeks of this phase of work. Noise levels are predicted to be higher than those during the workover rig

activity; however it is proposed that in order to minimise the impact on the community that this activity will be limited to daytime only. This will have to be defined, but it is suggested it should be between 07:00 -19:00 hrs. There will, however be preparation and low level activities taking place overnight.

Hydraulic fracture activities- daytime

Predicted levels for the hydraulic fracture activities during daytime range from 48-59 dB(A) $L_{Aeq,1hr}$ with the barrier present. The barrier which has been designed to reduce noise for daytime activity during the hydraulic fracture stimulation/well test phase is predicting a reduction of 4dB at Alma House and Shire Grove and 6dB at Kirby O Carr, however it is Kirby O Carr which will receive the highest levels. The Consultant assesses the predicted levels as within his SOAEL threshold of 70 dB(A) $L_{Aeq,1hr}$ daytime and 55dB(A) $L_{Aeq,1hr}$ for evening for two of the NSR, but at Kirby O Carr the predicted level of at 59 dB(A) $L_{Aeq,1hr}$, exceeds the evening SOAEL. The consultant concludes that due to the predicted and limited time period the effect is considered insignificant. Again the predicted levels are not considered insignificant, but due to the mitigation of the noise barriers, the levels are considered to be acceptable and in line with PPGM Guidance, other than at Kirby O Carr. It is debatable as to what is an acceptable standard for this activity, but on balance due to the limiting of the hydraulic fracture stimulation to daytime and its limited duration, on balance I do not believe there is sufficient grounds to sustain an objection to this activity on the ground of noise.

Hydraulic fracture activities- Overnight

No hydraulic fracturing will take place on an evening or night; however, there will be lower level activities being carried out. Predicted levels for these activities with the noise barrier in place range between 28-42 LAeq,1hr, which is considered acceptable for all NSR's.

Production Test

This phase will extend over 13 weeks over a 24hour period. The production test equipment comprises a temporary high pressure flowline which will connect the KM8 well with the existing gas production equipment on site, from which gas will flow to the Knapton Generating Station via the existing underground pipeline. Although the test will continue for an extended period, including at night, the predicted greatest change in levels is no more than 1.2dB despite the baseline levels at night been very low. Noise in this phase will be similar to that during normal gas production. It is agreed that the levels will be within acceptable limits and that no noise monitoring is considered necessary, unless complaints arise. Noise in this phase will be similar to that during existing gas production.

Production

This phase would see the flowline equipment installed on a permanent basis and the hook up of an array of other equipment necessary for the permanent producing well facility. The applicant has stated an estimated period that gas could be produced from the well to be nine years. Noise again will be similar to that during existing gas production.

Restoration

Site restoration activity will generate similar levels of noise as that during the initial construction of the KMA wellsite and conditions have been suggested.

Relevant Standards applicable to this development

It must be recognised that for a proposal of this nature and given the low levels of existing noise, that some degree of noise and disturbance is inevitable, however the question is, can it be mitigated to within acceptable levels having regard to the standards and duration of the proposed development ?

The acoustic consultant argues that hydraulic fracturing activity and any short term daytime activity associated with site preparation for mineral extraction or final restoration totalling less than 8 weeks/year falls under Paragraph 22 of the PPG - Minerals, and as such can generate up to 70 dB(A) $L_{Aeq,1hr}$. Such a level for such a period of time would be regarded as very disturbing. However it is stated that this is described as a maximum (limit) which suggests the objective would be to agree a lower limit if reasonable. The consultant does not believe that short term phases such as pre-stimulation workover and production tests which have to continue overnight are associated with 'normal production activities' and as should not be considered under Paragraph 21

As no quantified lower limit is specified, the consultant argues that guidance for appropriate limits during site restoration is provided within BS5228 -1, which is a standard which is used by the construction and engineering industries, and believes that as well as providing guidance on restoration BS5228-1, can be applied to other short term activities such as pre stimulation workover. A summary of proposed thresholds is provided in table 16.6 but the consultant states that the objective of the noise mitigation strategy is to achieve levels better (lower) than SOAEL values and approach LOAEL values where it is reasonably practical to do this, in line with NPSE and PPG guidance. The table however identifies maximum levels and not the predicted levels as the SOAEL levels of significance. It is recommended that it is the predicted levels that should aim to be achieved and I have suggested conditions accordingly.

Noise Monitoring Plan

The focus of the Noise Monitoring Plan is stated as the validation of the computer noise predictions through the monitoring and then the comparison of these with the significant effects threshold. The Plan advises that monitoring will be carried out simultaneously using unattended logging equipment capable of remote checking and downloading of data. This will monitor a range of specified noise criteria continuously during the day, evening and night for the initial period of each phase until levels are shown to be stable. Results will be reviewed initially on a daily basis and then weekly if levels become stable and levels are not expected to change. During the 5 daytime hydraulic fracturing events; levels will be reviewed within 24 hours. Final reports will be issued on completion of each of the three phases proposed to be monitored, namely the pre-stimulation workover, hydraulic fracture stimulation/well test and restoration.

There is no proposal to undertake any short term attended measurements particularly during the stages of the development which are predicted as having the largest noise impact e.g. workover and hydraulic fracturing. As audio samples cannot be analysed remotely any corrective action will be delayed and the reports as proposed will be retrospective. It is important that the Noise Monitoring Plan should either allow for attended on site analysis during the noisiest of events or have a system in place to analyse both readings and audio files remotely.

A series of Action Levels are proposed but are considered as far too high. The County Planning Authority are recommended to give consideration to requiring a revised Noise Monitoring Plan requiring attended noise monitoring/remote access to sound files and amendments to the proposed trigger levels by requiring that Action Level 1 is based on predicted levels and Action Level 2 be based on the proposed noise conditions. In addition the County Planning Authority should be notified within 24 hours and a formal report should be issued within one week of the noise specialist's visit.

Adequate noise monitoring will indicate the accuracy of the predictions and may well influence any further similar applications.

Traffic

Traffic movement on local roads is activity that will also potentially generate noise impact. Assessments have been undertaken utilising Calculation of Road Traffic Noise (CRTN) - Department of Transport and Welsh Office and also the design Manual for Roads and Bridges (DRMB), Volume 11. The low baseline flows on Habton Road are below the 50 movements/hour considered the minimum

that allows for a calculation using CRTN. The baseline traffic flows on Kirby Misperton Road are above this level. The impact assessments by the acoustic consultant indicate that predicted increase of noise from traffic associated with the pre-stimulation workover, hydraulic fracture stimulation/well test and restoration phases and the short duration of the proposed development are such that the effect on properties on the two roads is not considered to be significant.

Assessment of noise however is not the only criteria when assessing the impact of increased traffic flows in a rural village and surrounding areas, other factors such as size of vehicles, numbers of vehicles, access routes, times of access, duration of development, congestion etc are all relevant in making an overall assessment in relation to the impact of such a proposed development.

The County Planning Authority have raised a number of concerns over the Transport Assessment and are still seeking further information in their letter of 17 November 2015 to the applicant .

Air quality

An Air Quality Impact Assessment (AQIA) has been undertaken to identify and quantify point sources and fugitive emissions. The Assessment indicates that nitrogen dioxide is the predominant pollutant in relation to air quality. During the high intensity operational phases of fracturing operations for a duration (3 to 4 hours with a maximum total duration of 20 hrs), it is predicted that there could be an exceedence of air quality standards. Predictions for the 1 hour mean objective for nitrogen dioxide levels at two locations closest to the wellsite indicate an exceedence of the air quality objective during fracturing operations. However, the assessment considers the maximum process contribution for full time operation over a period of one year for each of five years meteorological conditions and considers it unlikely that all periods of fracturing will coincide with the meteorological conditions necessary to result in the maximum process contributions. This assumption is not however given any level of probability.

A longer term assessment of the predicted environmental concentrations of nitrogen dioxide indicates concentrations well below the air quality standard and at levels which will not significantly impact on air quality.

In addition, the model makes certain assumptions about the level of emissions which will be dependant on the age and emission standards for the machines.

It is recommended that the probability of an exceedence of the 1 hour mean for nitrogen dioxide is required together with the confirmation that the machinery proposed will comply with the levels utilised in the AQIA.

At all local sensitive nature conservation sites the impact on air quality is stated to be low and in most cases insignificant with no threat to relevant ecological benchmarks.

The Air Quality Emissions Monitoring Plan advises that for the majority of pollutants measured the samples will be collected on a fortnightly basis and then reported to Third Energy within 20 days of the collection of the sampling. It is stated that in the case of the dust deposit gauges if the level of $100\text{mg}/\text{m}^2/\text{day}^1$ in any sampling period is exceeded for three consecutive periods from any of the monitoring stations then Third Energy will investigate the possible causes and initiate a short term monitoring programme to measure PM10 levels at all locations on the site. The proposals do not provide for the submission of the results to the County Planning Authority, so it is recommended that this is included by way of condition.

While this may be satisfactory for a fixed installation and long term monitoring, the delays in analysis and reporting while providing monitoring information to be compared against what was predicted, will have no practical effect if there were some measures of mitigation that could be undertaken in the interim e.g. daily visual inspection of dust levels from the roadway to arrange for damping down. The exception to this is the proposed real time monitoring for the presence of natural gas which will be

deployed at the well through fixed and portable gas detection system. If detected, gas detection equipment will provide immediate indication of the release and operational control processes can be initiated to contain any release. The portable gas monitoring in addition to monitoring methane also monitors hydrogen sulphide, oxygen and carbon monoxide.

The County Planning Authority should require a daily visual assessment of dust level, in relation to the prevailing weather conditions and these observations and any measures of mitigation undertaken logged.

No flaring is proposed on the site and it is recommended that, as proposed by the applicant it is conditioned that all gas be piped to the Knapton Generating Station for assessment during the production testing phase.

An analysis of the gas composition did not identify hydrogen sulphide (H₂S) as being present. Although odour releases during the proposed development are not anticipated, it is proposed that continual monitoring for odour will be undertaken at the wellsite, however it does not specify the duration of that monitoring or how it will be undertaken. It is therefore recommended that an Odour Monitoring Plan be submitted to the County Planning Authority for approval.

Due to the possibility of exceedence of the 1 hour mean objective for nitrogen dioxide levels, during the period it is recommended that the Air Quality Emissions Monitoring plan be required to provide for real time analysis of nitrogen dioxide at either of the nearest residential premises, during periods of hydraulic stimulation, having regard to the meteorological conditions at such time

Water and waste

It is advised that 4,000m³ of water will be required to complete the proposed hydraulic fracturing operation and it is proposed to pump water from the Knapton Generating Station (KGS) to KMA via the existing pipeline ordinarily used for the transport of produced well water from KGS to KM3 water injection well. There is no information as to the pattern of water usage provided. There is some uncertainty as to the quantity of flow back water as the information states that all flowback water may be diverted directly to storage tanks and /or disposal at an approved Environment Agency facility. The County Planning Authority issued a Regulation 22 notice seeking further information and clarification on issues relating to water usage and storage in order to satisfy itself that there is sufficient storage on site for both the water requirements for the hydraulic stimulation and storage for waste water having regard to the worse case scenario regarding the anticipated flow back following hydraulic fracture stimulation operation. That information has now been provided.

The County Planning Authority should satisfy itself that in addition to adequate storage, that satisfactory arrangements are in place for the transportation and final disposal of the residual flowback water

Conclusion

The application site is for an existing wellsite and for the hydraulic stimulation of an existing well. This application contains no proposal to re-drill the well or undertake lateral drilling.

There are some shortcomings to the Air Quality Impact Assessment and associated Monitoring Plan and I require further confirmation as to probability of an exceedence of the 1 hour mean for nitrogen dioxide together with the confirmation that the machinery proposed will comply with the levels utilised in the AQIA. If this application is considered acceptable I would require the Monitoring Plan to provide for real time analysis of nitrogen dioxide at either of the nearest residential premises, during periods of hydraulic stimulation, having regard to the meteorological conditions at such time.

A balance has to be struck between not imposing unreasonable burdens on the developer and ensuring there would be no impact or unacceptable impact on local residents and the environment. Clearly it

must be recognised that for a proposal of this nature and given the low levels of existing noise, some degree of noise and disturbance is inevitable. The original application contained noise predictions based on an 8.7m noise mitigation barrier consisting of shipping containers and an inner facing absorption barrier. Subsequent information has been provided that an alternative noise barrier is proposed, with no evidence provided as to if the new barrier would prove equally or more effective as the original proposed barrier. As such I would object to this application unless such evidence is provided and can be assessed.

Having regard to the original proposals for a noise barrier, proposed duration of the proposal, the noise guidance available and the proposed mitigation and noise monitoring, I do not believe, if adequately conditioned, that there are sufficient grounds to sustain an objection on the grounds of noise.

Having regard to all the matters considered above, I am of the opinion that if the Planning Committee is minded to recommend approval for this development to North Yorkshire County Council, the following conditions should be applied. Some of the specific noise level conditions may require amendment if better levels of attenuation can be achieved particularly in relation to condition 1.

1. Prior to commencement of the development a finalised scheme of noise mitigation, including amendments to the originally proposed noise barrier shall be submitted to the County Planning Authority (particular regard having been paid to the south east part of the proposed noise barrier). The proposed measures of mitigation to be agreed in writing by the County Planning Authority prior to commencement of the development.

2. No HGV's involved in the delivery of materials and equipment to the site shall enter or leave the site on any day except between the following times Monday to Saturday 0700 -1900 hours unless associated with an emergency (emergency shall be regarded as circumstances in which there is a reasonable cause for apprehending injury to persons or serious damage to property)

3. No hydraulic fracturing stimulation shall take place outside the following times; Monday to Saturday 0800 - 1800 hours and at no time on a Sunday or Bank Holiday.

4. There shall be no access or egress by any vehicles between the highway and the application site until vehicle wheel wash facilities have been installed on the access road to the site in accordance with details to be submitted to and approved in writing by the County Planning Authority. These facilities shall be kept in full working order at all times. All vehicles involved in the egress from the site shall be assessed for cleanliness and shall be cleaned as necessary before leaving the site so that no mud or waste materials are deposited on the public highway.

5. A visual assessment shall be made of the access road and site in relation to dust levels twice a day (morning and afternoon) during use by vehicles and dust emissions shall be assessed according to a scheme submitted to and approved by the County Planning Authority.

6. Odour levels shall be assessed during operational works according to a scheme approved by the County Planning Authority.

7. A revised Air Quality Monitoring Plan shall be submitted to and approved by the County Planning Authority. The Plan shall provide for real time analysis of nitrogen dioxide at either of the nearest residential premises, during periods of hydraulic stimulation, having regard to the meteorological conditions at such time.

The atmospheric emissions generated in the course of the development shall be monitored in accordance with the Air Quality Monitoring Plan and the results of such monitoring should be submitted to the County Planning authority within 20 days from collection of samples.

8. No flaring shall take place on the site and all produced gas shall be piped to the Knapton Generating Station.

9. No works of restoration shall take place outside the following times; Monday to Saturday 0700 - 1900 hours and at no time on a Sunday or Bank Holiday.

10. Noise

The tables below give the noise limits for the particular locations, work activities and time periods.

Pre Stimulation workover

NSR	Noise limit Day 07:00 -19:00 dB(A) LAeq, 1 hr	Noise limit Evening and night 19:00 -07:00 next day dB(A) LAeq, 1 hr
1- Alma House	41	35
2 - Kirby O Carr	55	46
3 -5 Shire Grove	47	36

Hydraulic Fracturing/Well Test - daytime

NSR	Noise limit Day 07:00 -19:00 dB(A) LAeq, 1 hr	
1- Alma House	55	Not monitored
2 - Kirby O Carr	60	
3 -5 Shire Grove	50	

Hydraulic Fracturing/Well Test - evening/nighttime

NSR	Noise evening/nighttime 19:00 -07:00 dB(A) LAeq, 1 hr	
1- Alma House	35	Not monitored
2 - Kirby O Carr	42	
3 -5 Shire Grove	35	

Production

NSR	Noise limit Day 07:00 -19:00 dB(A) LAeq, 1 hr	Noise limit Evening and night 19:00 -07:00 next day dB(A) LAeq, 1 hr
1- Alma House	45	35
2 - Kirby O Carr	55	35
3 -5 Shire Grove	50	35

Restoration*

NSR	Noise limit Day 07:00 -19:00 dB(A) LAeq, 1 hr	
1- Alma House	55	
2 - Kirby O Carr	55	
3 -5 Shire Grove	55	

* Limited to 07:00-19:00 hrs

All noise levels to be free field

11. Noise monitoring.

A revised Noise Management Plan shall be submitted incorporating revised trigger levels based around the proposed noise condition limits, and providing for either some on site attended measurements or remote access to audio files for on site reporting of noise levels and actions proposed regarding breaches of trigger levels to the County Planning Authority. Such a plan to be submitted for approval in writing by the County Planning Authority prior to commencement of the development.

Economy & Community Manager

The Council's Economy & Community Manager has expressed concerns with regard to the potential impacts of the development on the local economy stating that:-

"Ryedale District Council commissions research from an organisation called TSE which identifies the value and volume of tourism annually. The 2014 figures indicate that approximately 25% of employment, or around 6,800 jobs in Ryedale are related to the visitor economy. This information is available on the RDC website

http://ryedale.gov.uk/attachments/article/699/Ryedale_Tourism_Economic_Impact_Estimates_2014.pdf

The purpose of this email is to remind you of the importance of the visitor economy to Ryedale and to ask if it is possible to negotiate similar package of measures to mitigate the potentially negative effect of Fracking in Ryedale on the visitor perception and therefore likelihood of visiting."

The Economy & Community Manager has drawn 'parallels' with another significant industrial development that was proposed elsewhere in the County and the potential in that instance for mitigation to the visitor economy in terms of possible S.106 contributions to mitigate the potentially negative effect of Fracking in Ryedale on the visitor perception and the likelihood of visiting the area.

Members will again note that reference to a possible legal agreement is made in the appended letter of the 17th of November 2015 but at the time of writing this report there are no mitigation proposals or submissions that have been drafted for consideration.

Members will note, having read the NYCC Head of Planning Service letter dated 17th November 2015 that not all of the additional information previously requested has been received and that a 'formal' extension of time to determine the application has been suggested. At this point in time the formal response of the developer to that request is not known and a number of possible outcomes remain. However, there is a risk that the additional information is not received and that NYCC is required to proceed to determine the application on the basis of the information already submitted.

It is considered, however, that Ryedale District Council should respond on the basis of the information currently submitted. If any further information under Regulation 22 is received this will be presented to Members for further consideration at a future meeting of the Planning Committee.

RECOMMENDATION - OBJECTION AND REFUSAL RECOMMENDED - subject to any further comments received from the Councils' Countryside Management Officer

On the basis of the current submission the Ryedale Council considers that inadequate information has been submitted for the Local Planning Authority to be able to properly assess the full impacts of the proposal on both designated and non-designated heritage assets. The proposal is therefore, contrary to the NPPF and the adopted development plan, Policy SP12 - Heritage.

The additional information submitted in respect of the alternative acoustic screen (as detailed in the Environmental Health Officers comments) is not accompanied by a detailed noise assessment to demonstrate its effectiveness. The EHO, therefore, objects to the amended noise barrier proposed in the absence of any further evidence to justify its use instead of the previously proposed 'container' barrier scheme.

Furthermore, it is recommended that no final decision can be made in respect of the application unless and until the remaining information requested by NYCC under the provisions of Regulation 22 of the Town and Country Planning (E.I.A) Regulations 2011 had been submitted by the applicant.

The submission of any additional information under Regulation 22 is required to be the subject of further consultation with Ryedale District Council as a statutory consultee.