

Item Number:
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 1st December 2015 meeting of the Planning Committee following confirmation that the applicants were intending to submit further information under Regulation 22 of the E.I.A Regulations 2011 to NYCC.

This followed an earlier deferral from the Planning Committee meeting of the 10th of November 2015. In the intervening period the Council has now received two further notification and consultation letters, dated 20th January 2016 and 24th February 2016 from North Yorkshire County Council.

The purpose of the 20th January 2016 letter advised of further information comprising:-

- Information submitted by Third Energy UK Gas Limited by email on 10 December 2015:
- Lighting Impact Assessment (ref. no. 100610R2) dated 10 December 2015;
- Non-Designated Heritage Assets Impact Assessment dated 25 November 2015; and,
- Response to comments from Friends of the Earth on Ecology (ref. no. 47073367) dated December 2015
- Letter dated 21 December 2015 with regard to the Environment Agency's consultation response to the County Planning Authority;
- Letter dated 22 December 2015 from Eversheds LLP on behalf of Third Energy UK Gas Limited with regard to ant potential legal agreement;
- Letter dated 24 December 2015 accompanied by :
- Supplementary Environmental Information relating to Chapters 1 to 11 (dated 23 December 2015) of the Environmental Statement (previously submitted)

- Appendix 1- Kirby Misperton Bridge Principle Inspection and Assessment Report (ref. no. 13716Y-02) (dated December 2015);
- Appendix 2 - Landscape and Visual Assessment (dated 18 December 2015);
- Appendix 3 - Traffic Management Plan (dated 17 December 2015);
- Appendix 4 - Lighting Impact Assessment (ref. no. 100610R2) dated 8 December 2015;
- Appendix 5 - Noise Impact Assessment of Alternative Noise Barrier System (ref. no. AP607/14327) (dated 15 December 2015); and
- Appendix 6 - Site Layout Plans.
- Letter dated 6 January 2016 accompanied by :
- Supplementary Transport Note 1; and,
- Supplementary Transport Note 2.

The 24th February 2016 letter advised of the following:-

- Information received via e-mail on Monday 25 January 2016:
- Proposed draft planning conditions:
- Information received via e-mail on Friday 5 February 2016:
- An overarching response to objections raised on behalf of FrackFreeRyedale (FFR):
- A response in respect of FFR objections on ecology matters;
- A response in respect of FFR objections on air quality matters made in Oct 15;
- A response in respect of FFR objections on air quality matters made in Nov 15;
- A response re:FFR objections on hydrogeology, water quality and Flood Risk Assessment;
- A response in respect of FFR objections on noise;
- A response in respect of FFR objections on public health; and
- A response in respect of general representations made in objection to the proposed development

For ease of reference, given the passage of time, copies of the documents informing the agenda papers on 1st December 2015 are attached, together with copies of the 2 further consultation letters from N.Y.C.C. in January and February.

In the intervening period a number of detailed (and sometimes lengthy) documents have been submitted that address the additional matters requested by NYCC under Regulation 22.

Further Assessment

Countryside Management Officer

Comments dated 25.11.2015 are attached and remain as previously stated.

At present that is no Habitat Regulations Assessment available to inspect on the NYCC website.

Economy & Community Manager

Further to earlier comments made the Economy and Community Manager has noted the submitted supplementary transport notice and makes the following additional comments:

' As you know, a draft version of the Malton to Pickering Cycle Route study report has been produced and consulted upon. Consultation has taken place with Parish Councils, District Councillors and County Councillors whose parishes or constituencies lie on or close to the proposed route. The final version of the report is due to be produced imminently and will take into account the responses received during the consultation process.

The proposed project has the support of the Ryedale Cycling Forum and is due to be implemented, subject to securing the required funding and formal consents. Funding for the detailed design and implementation of the scheme is already actively being applied for.

Much of the proposed route follows existing quite country roads with low traffic volumes and speeds and is already ride-able in its current format. The proposed traffic management plan for the site routes all development traffic along Habton Road, through Kirby Misperton and along Kirby Misperton Road to the A169. This route also forms a key section of the proposed cycle route and any increased vehicle movements (particularly HGVs) on Habton Road, the roundabout within the village of Kirby Misperton and Kirby Misperton Road out of the village to the east will have a detrimental effect upon the rural character and therefore attractiveness of the route – particularly to less confident cyclists, including younger families.

Supplementary Transport Note 2 (STN2) indicates that during the mobilisation, pre-stimulation workover and hydraulic fracture stimulation period “Maximum daily two-way HGV movements are expected to be 48 (half to the well site, and half from the well site)”

Tables 4.1 and 4.2 of STN2 show existing vehicle flow data on Kirby Misperton Road and Habton Road respectively. Using the figures stated, it would appear that existing 7-day average daily HGV flows on the two roads are:

- 100.4 for Kirby Misperton Road
- 18.5 for Habton Road

Using the expected maximum daily 2 way HGV movement figure of 48, this represents significant projected increases in daily HGV flows on these two roads of 47.8% and 259.5% respectively. The developer’s Transport Assessment, however, suggests that this level of HGV movement will be short term in nature (8 weeks). There would no doubt be also be similar HGV movements generated during the subsequent site restoration process, post-production.

The Transport Assessment states that following the initial mobilisation and site establishment period HGV movements “will be limited to the delivery and installation of the welded flowline, which is anticipate [sic] to be two single HGV movements, and the removal of produced water...”, although no indication is provided of the anticipated number of HGV movements the removal of produced water might generate. The TA states that there will be negligible traffic movements during the period of production test and production.

In summary I would reiterate that any increase in traffic flows, particularly of HGV’s, could have a detrimental effect on the character and attractiveness of the proposed route.

I would be grateful if you could include these points in your consultation response to NYCC.'

Building Conservation Officer

To date a Non-Designated Heritage Assets Assessment has been submitted together with Supplementary Environmental Information relating to Chapters 1 to 11 of the ES. Appendix 1 refers to Kirkby Misperton Bridge - Principle Inspection and Assessment Report (dated December 2015), carried out by Mason Clark Associates - Civil & Structural Engineering Consultants.

Both documents are extensive and are currently being considered by the Council's Building Conservation Officer in the light of the Building Conservation Officers earlier objections relating to the inadequacy of submitted information in respect of both Designated and Non-Designated Assets.

Members will be updated 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 2015 and 17 November, requesting further information under Regulation 22 of

the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. Other matters were also included in the letters that requested responses to consultation received to date and a request for points of clarity and a list of outstanding matters. Information was subsequently been sent to NYCC, and Ryedale District Council were formally re-consulted on the application on 20 January 2016. The Head of Planning Services at NYCC has subsequently written to the applicant on 8 February 2016, formally requesting an extension of time until 29 April 2016 and identifying the circumstances that warrant a request for a further extension of time. The agents have acknowledged receipt of the request but to date have not yet agreed to the request.

The letter of 17 November 2015 from the Head of Planning Services at NYCC requested the submission of draft planning conditions, without any prejudice to any formal decisions that the County Planning Authority may take with regard to the application. The applicants provided draft conditions based on statutory consultee responses in a response dated 25 January 2016.

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 tranquillity 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 (LA90,1h) 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 (LA90,1h) 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 original Environmental Statement submitted to NYCC on 29 July 2015 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,1hr} (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 was originally 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 shipping container to act as sound barriers. 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 included reference to " *alternative noise attenuation systems are currently being considered*". Information was then 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."

No Noise Impact Assessment was provided of the new proposal. Following on from this a further Environmental Statement providing Supplementary Environmental Information (KM8 ES SEI/Rev0/23-12-2015) dated 23 December 2015 was submitted, which formally proposed an alternative noise attenuation system, the Echo Barrier, which now supersedes the previously proposed ISO shipping container system. The revised proposal is

'In advance of the pre-stimulation workover and subsequent hydraulic fracture stimulation, a noise attenuation barrier will be mobilized to the wellsite. The noise attenuation barrier proposed within the planning application is constructed using a combination of single height ISO 'high cube' single height shipping containers (2.9m high) at the base of the barrier and a scaffold frame extending to an overall height of 9m. Individual Echo Barrier panels, the dimensions of which are 2m x 1.2m, will then be attached to the scaffold frame, overlapping each other and the ISO shipping containers to provide a competent noise attenuation system'

Revised vehicle movements indicate a total of 72 individual HGV movements as oppose to the approximate of 68 stated above.

Following my previous criticism of the proposals a Noise Impact Assessment has been undertaken of the revised barrier in relation to the original proposal.

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. This assessment is based on the original Noise Impact Assessment.

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) LAeq,1hr. Measured pre - existing daytime ambient levels are however 52dB(A) LAeq,1hr, mainly due to traffic and milking equipment associated with the farm, but reducing to 30dB(A) LAeq,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) LAeq,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

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) LAeq,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) LAeq,1hr daytime and 55dB(A) LAeq,1hr for evening for two of the NSR, but at Kirby O Carr the predicted level of at 59 dB(A) LAeq,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 applicants 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) LAeq,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.

In addition to reviewing the original noise assessment submitted with the original Environmental Statement on 29 July 2015, I have also taken into account the criticisms of that report by MAS Environmental and subsequent response to this by Spectrum Acoustics Consultants in their letter of 9 February 2016. The latest Noise Impact Assessment submitted as part of the Supplementary Environmental Statement (23 December 2015), indicate that comparisons of the proposed alternative Echo Barrier screening system with that originally proposed shows that the acoustic performance does not significantly differ between the two.

Taking into account all the above matters, it is recommended that it is the original predicted levels that should aim to be achieved and I have suggested noise level conditions accordingly. These proposed noise levels have been accepted on a without prejudice basis by the applicants as part of their draft condition proposals.

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. The proposals for a different noise attenuation barrier will reduce HGV movement from 156 for the original barrier to 72 for the revised barrier proposals.

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 has raised a number of concerns over the Transport Assessment and are sought further information in their letter of 17 November 2015 to the applicant. Further information has been submitted in the Environmental Statement –Supplementary Environmental Information dated 23 December 2015.

Air quality

The original Air Quality Impact Assessment (AQIA) (ESG report 150332, Revision 8 dated 30 June 2015) identified and quantified point sources and fugitive emissions. The Assessment indicated that nitrogen dioxide would be 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 was 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 indicated an exceedence of the air quality objective during fracturing operations. However, the assessment considered the maximum process contribution for full time operation over a period of one year for each of five years meteorological conditions and considered it unlikely that all periods of fracturing would coincide with the meteorological conditions necessary to result in the maximum process contributions. This assumption was not however given any level of probability.

A report (J2368/2/F1 dated 13 October 2015) was undertaken by Air Quality Consultants (AQC), raising issues with the Revision 8 ESG AQIA. ESG Issued a revised AQIA dated 17 September 2015 (Revision 10, report 150332). A subsequent AQC report, *Addendum to Review of Air Quality Assessment (J2368/3/F1)* dated 20 November 2015 was submitted as part of the Response from Frack Free Ryedale in their November submission to the County Planning Authority. ESG issued a further report, *Response to 'Review of Air Quality Assessment: Kirby Misperton A Wellsite'*, Air Quality Consultants, October 2015 (Report 150332S) dated 4 November 2015. The purpose of the report being to address the issues raised by AQC and, where appropriate, to provide additional information for areas requiring clarification. In addition a subsequent submission by ESG has reviewed the baseline monitoring data in light of comments by AQC (20 November 2015).

A review of all the above documents has been undertaken and further information has been provided in relation to my original concerns as to the possibility of short term exceedence of the 1 hour mean

objective for nitrogen dioxide. The original assessment sought to consider worse case conditions and looked at each operational phase over the period of one year with the intention that this would be taken into account. The most polluting events are short term events arising from the use of stationary and mobile equipment on site. These events are not continuous but are sporadic and limited to a relatively short overall period of operation. In order to address the concerns and to provide some definitive measures of process impact, the assessment of the entire operation has been assessed, providing a more representative approach to the determination of the impact of air quality of the proposed operation. The revised assessment seeks to provide a more representative measure of impact by looking at the entire operation and at the nearest residential locations. The maximum process contribution of all pollutants when considered on both a short term and long term basis are below the level of significance in relation to the air quality standards and as such it is not considered that process contributions will have any significant impact at the nearest residential locations to the wellsite. The Supplementary Environmental Information (23/12/2015) advises that proposed changes to the noise barrier and consequent reductions in HGVs, both will have an insignificant impact on 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(Original 15/5/2015 and Revision 2 17/9/2015) advise 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 100mg/m²/day¹ 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 original proposal did not provide for the submission of the results to the County Planning Authority. This has subsequently been rectified in the Regulation 22 response (25/10/2015). 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 issue of dust is now taken into account in section 5.2 of the Traffic management Plan Revision 3, dated 17 December 2015. 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.

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 was originally no information as to the pattern of water usage provided and 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. The County Planning Authority has subsequently sought assurances that the existing reinjection pipeline to be used for supplying water to MK8 would not be used for waste water re-injection of condensate down the KM3 well while the hydraulic fracture simulation would be taking place. A statement has been provided in Chapter 3.10 of the Supplementary Environmental Information (23/12/2016) in relation to this request.

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.

The original shortcomings to the Air Quality Impact Assessment have been reassessed. The maximum process contribution of all pollutants when considered on both a short term and long term basis are below the level of significance in relation to the air quality standards and as such it is not considered that process contributions will have any significant impact at the nearest residential locations to the wellsite. 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 Supplementary Environmental Information (23/12/2016) has been provided which proposes an alternative noise barrier, together with a Noise Impact Assessment, which concludes that the acoustic performance of the revised acoustic barrier will not significantly differ from the original proposed.

Having regard to the revised proposals and assessment of the noise barrier, proposed duration of the proposal, the noise guidance available, 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.

1. Wheel wash facilities shall be installed on the access road to the site prior to the commencement of this development and in accordance with details as set out in the approved Traffic Management Plan dated 29th June 2015 (as amended 11th December 2015, Revision 3), unless otherwise agreed with the local 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.

2. 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. Dust emissions shall be assessed in accordance with the details as set out in the approved traffic management plan dated 29th June 2015 (as amended 11th December 2015, Revision 3) unless otherwise agreed in writing with the County Planning Authority. If levels are assessed as significant, damping down of the access road should be initiated immediately and maintained until conditions improve.

3. 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)

4. 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.

5. The atmospheric emissions generated in the course of the development shall be monitored in accordance with the Air Quality Monitoring Plan Revision 2 dated 17 September 2015, submitted to the County planning Authority on 26 October 2015. The results of such monitoring should be submitted to the County Planning Authority within 28 days from collection of samples.

6. Noise

A revised Noise Management Plan shall be submitted to the County Planning Authority, incorporating revised trigger levels based around the proposed noise condition limits as set out in the table below. The Noise Management Plan shall provide for the reporting of noise levels and breach of trigger levels to the County Planning Authority. Such a plan is to be submitted for approval in writing by the County Planning Authority prior to commencement of the development.

The noise levels at the nearest sensitive receptors shall be as stated in the table below.

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 Monday to Saturday

7. All plant and machinery shall be adequately maintained and silenced in accordance with the manufacturer's recommendations at all times

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

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

10. 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.

Comments on Draft Planning Conditions**Highways**

My proposed condition 1 matches the Third Energy proposed condition 7, except for the avoidance of doubt, with the added requirement that the wheel wash facilities shall be installed prior to the commencement of the development. Although the cleanliness of the roads and measures to suppress dust are referred to in Traffic Management Plan Revision 3, dated 17 December 2015. I can find no reference to wheel wash facilities.

My proposed condition 2 matches the Third Energy proposed condition 8, except for the additional requirement for action following an unsatisfactory assessment that if levels are assessed as significant, damping down of the access road should be initiated immediately and maintained until conditions improve.

Hours of Working

The Third Energy proposed condition 14 is *“With the exception of pre-stimulation workover phase and the hydraulic fracture stimulation/well test phase, no workover operations or movement of HGVs to and from the site or installation of production test equipment shall take place except between the following times:*

Monday to Friday 0700 – 1900 hours

Saturday and Sunday 0700-1900 hours

This condition shall not apply to the carrying out of essential maintenance to plant and equipment used on the site.”

My proposed condition 3 seeks to limit HGVs activities for **all** activities between 0700-1900 Monday to Saturday, i.e. excludes Sundays unless associated with an emergency. The Third Energy proposal seeks an exception for essential maintenance.

My condition 4 seeks to limit hydraulic fracturing stimulation to between 0800 -1800 hours Monday to Saturday and at no time on Sunday or Bank Holidays. The Third Energy proposed condition 15 seeks to limit such activities to

- Monday to Sunday 0700-1900 hours (April to October)
- Monday to Sunday 0800-1600 hours (November to March)

My condition 10, requiring 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 is linked to the proposed noise conditions. It is not proposed by Third Energy in their draft conditions.

Air Quality

My condition 5 is the same as Third Energy proposed condition 19, with the difference that they are proposing that the results of such monitoring should be submitted to the County Planning Authority at the end of each calendar year, whereas I am requiring reporting within 28 days of each sampling period.

Noise

The applicants have accepted the basis for my proposed noise conditions.

The original proposal was that in addition to the noise levels stipulated above in condition 6 that a separate noise condition in relation to noise monitoring also be imposed as detailed below.

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.

The draft condition 24 proposes incorporating the requirement for a revised Noise Management Plan to take into account my previous request. I have subsequently amended my condition 6 to take account of this and removed the original condition 11.

As a consequence, the proposed condition 23 appears to add nothing to condition 24, which will require full implementation before agreement by the County Planning Authority.

The table detailed in the applicants condition 24, is in effect requiring the same levels and I would be happy to accept this table with the addition that in relation to restoration that activities are limited between 0700-1900hrs Monday to Saturday.

Proposed condition 25 *“All plant and machinery shall be adequately maintained and silenced in accordance with the manufacturer’s recommendations at all times”*, is accepted and duplicated in my proposed condition 7.

Odour

My proposed condition 8 matches Third Energy, proposed condition 26.

Flaring

My proposed condition 9 is similar to Third Energy proposed condition 27, in that both propose no flaring on site, but my proposed condition also requires that all produced gas be piped to Knapton Generating Station.'

Recommendation

- 1 The Council's Building Conservation Officer continues to appraise the further information submitted in respect of Designated and Non-Designated Heritage Assets. A final recommendation in respect of both of these issues will accompany the late pages
- 2 The Council's E.H.O. has given careful consideration to the submitted proposal in respect of noise; traffic; air quality and water has concluded that subject to strict compliance with the stringent conditions listed that he is satisfied that these requests can be satisfactorily mitigated. It is, however, requested that NYCC confirm that these conditions are acceptable to the applicant. Failure to secure agreement to the conditions listed in order to mitigate the impacts would render the application unacceptable to the E.H.O.
- 3 the Council's Economy and Community Manager continues to raise concern regarding the potential advice of the proposal on the visitor economy and the potential adverse impacts upon the proposed Malton - to - Pickering cycle route.
- 4 Final recommendation - to follow on the late pages.