

The inspector has asked the Council to produce further work on various points regarding hydrocarbons. Submission of Frack Free Ryedale

03 April 2018

Submission of Frack Free Ryedale

1) Policy M17 (4) (i) – justification on the 500m buffer around residential properties and other sensitive receptors

General

Hydraulic fracturing is a novel or nascent industrial method of gas extraction onshore in the UK. It has to date only been carried out once, at Preese Hall in Lancashire.

Whilst Frack Free Ryedale (FFR) support the principle of the buffer zone it is considered the 500m should be a minimum (FFRs consultation responses have always sought a greater distance) to ensure adequate protection of residents and their amenity. A case by case basis would be an inconsistent approach to ensure adequate protection is in place for residential communities across the country.

As it is a novel industry we are under a duty look at experiences in other parts of the world where it is carried out at a large scale. There is compelling evidence from around the world that a buffer around unconventional hydrocarbon extraction sites is both a practical and accepted spatial planning principle.

For safety purposes there is a need for protection from any unexpected events on site. In the worst instances in other parts of the world operatives and nearby residents have been killed by gas explosions, some from the sites themselves and some from associated infrastructure. These, depending on different regulatory regimes, have occurred where negligible buffer zones existed.

Given the maturity the industry is now reaching, particularly in North America, FFR would expect the USA regulations to be the best developed in the world as they have had the most experience of dealing with hydraulic fracturing. This is a principle that the UK Onshore Industry recognise and agree with. UKOOG¹ quote American Petroleum Institute papers in relation to hydraulic fracturing in their guidance to the onshore industry.² However there are regular issues in respect of well site leaks, fires, explosions etc³ Incidents often have required the evacuation of site workers and the closest residents to the site. These incidents often have caused injury and some fatalities.

On the hydrocarbons day, 13 March 2018, oral evidence was given by the industry regarding the number of wells (fracked) in the US. FFR believe the figures were erroneous and it is closer to around 300,000 wells in total. In the referenced interview, the author (Asst Professor of Epidemiology at Yale) N C Deziel says in relation to the US "*Hydraulic fracturing occurs in at least 25 states. There have been approximately 300,000 wells drilled and hydraulically fractured since 2000. An estimated 10 million people live within one mile of an oil or gas well, potentially placing them in contact with chemicals released into the air or water*".⁴ This figure is further reinforced by the US Government's EPA report in 2016 which quotes a figure of approximately 275,000 'hydraulically fractured' wells in 2013, quoted in the title to Figure ES-2 p6.⁵

So whatever the figure it is much closer to 300,000 than the figure quoted by the industry representatives.

¹ UKOOG = United Kingdom Onshore Oil and Gas, an Industry 'body'

² Page 33 Appendix 4 - http://www.ukoog.org.uk/images/ukoog/pdfs/Shale_Gas_Well_Guidelines_Issue_4.pdf

³ Table of some recent incidents – Appendix 4

⁴ <http://publichealth.yale.edu/article.aspx?id=16576>

⁵ https://www.epa.gov/sites/production/files/2016-12/documents/hfdwa_executive_summary.pdf

Public Health

Health effects are widely reported in relation to overseas operations involving Unconventional Gas Extraction too and are referenced by many countries that either have moratoria or bans in place. The large majority of literature makes the connection between harms to public health and the proximity to hydraulic fracturing activity.

A whole series of papers from the highly regarded School of Public Health at Johns Hopkins University have show the increase in harm in association to the exposure from wells, whether it is Radon levels in the home⁶ (Radon being the second most common cause of lung cancer) pregnancy related issues⁷ (40% increase in prematurity close to the wells compared to further away) asthma attacks⁸ (1.4 to 4 times as many attacks needing oral steroids in hospital depending on age group studied) migraine and other effects.⁹ It is clear that most of the reports call for further research in relation to these effects. The number of reports is large and increasing year on year.

As this is a novel industry onshore in the UK we should look at this evidence and exercise caution in siting of the well to minimise any possible impacts arising in our heavily faulted geology and in our local populations. The NPPF encourages us to use 'sound science responsibly'.

It would be irresponsible and negligent to ignore this in terms of planning and public health, another example is referenced.¹⁰

An example locally at Kirby Misperton

FFR aim to clarify some of the information provided around the existing operations in the Vale of Pickering and the effects on residents which is contradictory to the oral evidence/statement given by Mr Alan Linn of Third Energy at the Examination in Public on 13 March 2018. It is noted that Mr Linn has only been in post for a matter of a few months since his predecessor John Dewar retired in October 2017.

There have been effects on Kirby Misperton and some of these have changed the community even though fracking has not as yet taken place. FFR include

- The effects on The Cray family who have lived through the site operations. Their observations are consistent with the experiences cited by other residents in the village too¹¹
- The effects on the Bartlett family and how fracking was a significant consideration in choosing whether to make their home in Kirby Misperton or elsewhere.¹²

⁶ <https://www.jhsph.edu/news/news-releases/2015/increased-levels-of-radon-in-pennsylvania-homes-correspond-to-onset-of-fracking.html>

⁷ <https://www.jhsph.edu/news/news-releases/2015/study-fracking-industry-wells-associated-with-premature-birth.html>

⁸ <https://www.jhsph.edu/news/news-releases/2016/study-fracking-industry-wells-associated-with-increased-risk-of-asthma-attacks.html>

⁹ <https://www.jhsph.edu/news/news-releases/2016/study-unconventional-natural-gas-wells-associated-with-migraine-fatigue-chronic-nasal-and-sinus-symptoms.html>

¹⁰ See pp114-125 <http://concernedhealthny.org/compendium/>

¹¹ Revd Cray – statement - Appendix 1

¹² Joanne Bartlett – statement - Appendix 2

- There were many representations made in the NYCC Planning Committee hearing on 20 and 23 May 2016 relating to KM8 where there clearly were effects and testimonies given by local residents, and here FFR give just one example^{13 14}

Furthermore there were questions raised in the Examination in Public as to the closest receptors to KM8 at Kirby Misperton and the fact that these are closer than 500m. An explanatory diagram and explanatory table provides detail of the circumstances and the background around land ownership, tenure and the inextricable link between the two.¹⁵ There is a conflict which must be understood as the nearest property is in the same ownership as the well site (KM8) itself. Alma Farm is understood to be let as a residential unit not a working farm. The house is closest to the wellsite but is shielded to some extent by brick built and other agricultural buildings being situated between the house and the wellsite itself. Kirby-O-Carr has suffered much disturbance during site operations mainly due to its location opposite the site access.

The operator (Third Energy) is currently waiting to receive Hydraulic Fracturing Consent from Secretary of State (SoS) DBEIS. Virtually all equipment has now been removed from the site. The reason for this is that the SoS has asked for a financial resilience test to be conducted in respect of the operator.

What this means in local terms is

- that the residents will have to endure all the effects of the transport of the equipment including police diverting traffic through the village and over a Listed Bridge – contrary to the approved TMP and the advice of Historic England, on multiple occasions
- site operations for a second time in readiness for fracking to proceed
- the community have no sanction – they just have to put up with it
- this is irrespective of the decision to giving planning permission for this site was based on specific vehicle traffic movements and site operations
- it will be experienced for virtually twice as long as originally given permission for, and again the community simply have to put up with it

2) Policy M16 (a) and explanatory text – further explanation on the split between conventional and unconventional and how this has been dealt with in policy provisions

Irrespective of how the policy is phrased, it must recognise the major differences between conventional and unconventional extraction, and specifically hydraulic fracturing

- High pressure is an essential element as the geology must be fractured to break the adhesion of the hydrocarbon from that geology
- The drilling method requires large quantities of water to arrive and leave the site

¹³ Suzanne Rayment – written statement – Appendix 3

¹⁴ Suzanne Rayment – film of verbal representation Film 3 25mins to 27 mins 45sec at <https://www.youtube.com/watch?v=oq664cAL9LI>

¹⁵ Diagram of KM8 – Appendix 5

- Additives to the water are described continually as 'non hazardous'. They are defined by a complex document published by the Environment Agency. 'Non hazardous' does not mean a substance does not cause harm.
- The number of wells needed to continue the flow of gas is far greater and a much more visible scale than for drilling into a conventional reservoir.¹⁶
- The effects on the community are of a far greater magnitude until the production stage. Unconventional extraction is not like conventional extraction as drilling will be needed for new boreholes even in the production phase to keep the gas flowing.
- Local impacts are significant. Based on the limited onshore UK evidence to date planning conditions are unable to deal effectively with items such as traffic management in any effective manner from the local community's point of view¹⁷.
- The wider local cumulative impacts must also be managed effectively

The agreed policy must reflect these differences. The policy should also build provision for the best monitoring available and regular review to enable the effects of this industry to be effectively dealt with in terms of public health and planning.

¹⁶ At Preston New Rd Lancashire Cuadrilla have applied to alter a planning condition for a drilling rig in excess of 50m height

¹⁷ In both Lancashire (Preston New Rd) and North Yorkshire (Kirby Misperton) there have been breaches of the traffic management plan, for which there is no sanction on the operator, or certainty for the community. If certain routes and hours are agreed as a condition then these should be adhered to and penalties applied when breached.

Appendix 1

Statement from a Kirby Misperton Resident

The Impact of Fracking on Kirby Misperton

Proximity to a proposed fracking site has caused stress and distress to the villagers of Kirby Misperton ever since the well was drilled in 2013.

During the drilling, noise and light pollution left one of the nearest residents to the site unable to sleep for weeks on end, causing her deep distress. Traffic to the site through Main Street was disruptive and disturbing then and even more recently since November 2017 as the fracking equipment was brought in through the village. The company had assured us there would only be some 200 HGV movements, but their planning permission granted them 900. Our air quality deteriorated during this period when large numbers of diesel vehicles came through. Our narrow rural roads were not built for this scale of traffic.

The disruption has continued. We have had three releases of a nauseous smell from the Third Energy site - two of them resulting in some one needing hospital treatment. (We have a number of residents with serious chest conditions.) One whole family who were made unwell on the second occasion have also suffered from the light pollution in their son's bedroom. One local farmer has been unable to sleep due to the on-site generators. It was suggested he wear ear plugs, but his wife has dementia and he dare not if he is to care for her. A dairy farm is also located directly outside the site entrance.

The Makeover Rig got stuck where the road bends out of Main Street on its way towards the site, and then grounded on a Grade Two listed bridge on its way out. Large vehicles have to be escorted the wrong side of the roundabout in the village, with one near miss with a Coastliner bus. One small chemical spill has been observed (and smelt) at the roundabout.

The Makeover Rig is particularly disruptive. It is tall and brightly lit twenty four hours a day. It could be seen for miles around. Security lights at the entrance to the site have also been intrusive and disturbing for the young family who live opposite.

The arrival of fracking has changed the whole experience and prospects of living in this village. The race horse training stables closest to the site has recently lost a major client due to its proximity to fracking, and the owner has indicated that he will have to move his business – if he can. The village pre-school which was highly rated by Ofsted, has decided to close, because proximity to fracking puts off parents from outside the village. The owner of the village pub and a static caravan site which is within 400 metres of the well site, has sold his businesses to Flamingo Land and is leaving the village. A regular visitor to the caravan site has told us he will not return. A number of houses have been up for sale for months, but are never viewed once the Estate Agent informs any prospective buyer that it is near the fracking site. Some residents feel trapped here as they cannot sell.

All of this has been our experience with the set up phase only, as the Minister has not granted Third Energy permission to carry out tests fracks, while their finances are under scrutiny. The impact of fracking, with plans for multiple wells on this site, for years to come awaits us if we are not granted adequate statutory protection

Given the number of well pads planned for North Yorkshire it is imperative that there be proper protection for local communities and the local economy: both a minimum statutory distance from homes, communities and businesses, and discretion to extend this it when local circumstances require.

+Graham Cray – Address Redacted- Kirby Misperton YO17

Appendix 2

Witness statement of a former resident of Kirby Misperton

Statement from Joanne Bartlett, York (address redacted)

Ms C Edwards
North Yorkshire County Council
County Hall
Northallerton
North Yorkshire
DL7 8AD

Dear Ms Edwards

Statement for consideration: Minerals and waste joint plan

Having lived very happily in the close-knit community of Kirby Misperton for 5 years, we made the decision to move in early 2014. The decision was initially to be closer to our places of work as our family grew. However, by the time we eventually sold the house and moved in mid 2015, we were extremely relieved to be leaving.

The threat of large lorries and increased traffic movement rumbling past the end of our driveway and on past my daughter's nursery, the entrance to the playground and village hall was a major concern. Added to that the lack of evidence supporting the safety of fracking elsewhere in the world (in the short, medium and long term), any evidence of robust regulation, the closing/diversion and industrialisation of footpaths along which I walked the dog every day, and the increasing division within the community about how best to address the threats. Kirby Misperton was no longer a village I enjoyed calling home.

The process of selling our house was difficult, with numerous people cancelling viewings or asking awkward questions once they found out about the proximity of the proposed fracking site.

I will always look back fondly on our time pre-fracking application in Kirby Misperton. I have visited the village a number of times since and find it a much more divided and unsettled community. I would certainly not move back there, or anywhere threatened so immediately by this industry.

Yours Sincerely

Mrs J Bartlett

Appendix 3

Written representation made to the NYCC Planning committee in relation to KM8 Fracking Application in October 2015

--Redacted--
Kirby Misperton
Malton
--Redacted--

3rd November 2015

The Planning Officer
Planning Services
County Hall
Racecourse Lane
Northallerton DL7 8AH

Dear Sir or Madam

Reference Planning Application No. NY/2015/0233/ENV

I submitted my objection on 12th October and sent it by Royal Mail Special Delivery and by email. I asked for this to be included on the Planning Register with my personal details removed. I cannot see my objection on the Planning Register. I enclose a typed transcript of my original handwritten letter, should there be a problem including handwritten letters to the Planning Register.

Yours faithfully

Suzanne Rayment

Enc: Transcript of the original letter sent to you on 13th October by email and post

--Redacted--
Kirby Misperton
Malton
--Redacted--

12th October 2015

The Planning Officer
Planning Services
County Hall
Racecourse Lane
Northallerton DL7 8AH
km8application@northyorks.gov.uk

Dear Sir or Madam

Reference Planning Application No. NY/2015/0233/ENV

I am writing to **object** to the above planning application by Third Energy to frack at their existing KM8 well at Kirby Misperton. I am a very concerned resident with first hand experience of the disruption and distress caused by Third Energy's operations at Kirby Misperton. I live approximately 0.48 of a mile from the site.

I moved to my current home 9 years ago. I chose the area as it is a quiet, peaceful and rural location.

In the summer of 2012, there was drilling activity on the site near my home. I could see the drilling equipment from my bedroom window. I did not sleep during the summer whilst the drilling was going on. I rang the company every night and was assured that the noise would stop at the end of August. I was told to keep my windows closed and they would send me a fan (it was summer). The noise finally stopped at the end of September.

One night during this period, my partner and I couldn't sleep again and we went round to the site. I asked the operative if they were fracking and they said "no, no. We are pumping water into the hole to get the gas out. I was made so ill by the lack of sleep and distress that I was prescribed medication by my doctor. I am extremely anxious about the application to frack as I am fearful about what will happen to me again. Nobody understands how noisy it is unless they've been impacted as I was. I feel very scared and frightened.

I attended one of the first consultation meetings at Kirby Misperton Village Hall with the applicant, Mr John Dewar. I shared my concerns in this public meeting. Mr Dewar did not know what to say. He came to my house and offered to triple glaze my windows. Mr Dewar said to my partner that “if fracking went ahead over there, there could be a job in it for you” I didn’t know what to say to this.

Earlier this year (2015), Mr Dewar placed a microphone in the garden to capture the background noise. During this period my partner and I awoke at 4am in the morning to an unusual droning noise. We went round to the site to discover the noise was coming from the farm opposite and was caused by the milking equipment. We thought this was odd as we’d not been disrupted in this way before nor have we since the removal of the microphones.

I am very fearful about fracking. I’ve had first hand experience of the gas operations and drilling at Kirby Misperton. How can fracking be alright. In 50 years time what will the consequences be? The energy companies don’t know. Nobody knows. We should not be doing this. I strongly object to the application to frack.

I request that my objection and comments are included on the planning register. Please respect my confidentiality and remove my personal details.

Yours faithfully

Suzanne Rayment

Appendix 4

Table of recent incidents relating to evacuation etc

Event and date	Location	Comment	Reference
Wellsite fire (vehicles) 18 March 2018	Nr Dawson Creek, British Columbia, Canada	Evacuation of site and closest residents	EnergyCity ¹⁸
Wellsite gas leak 13 March 2018	Deer Point Rd, Washington County, Texas, US	Evacuation of closest residents	KWTX ¹⁹
Well pad explosion 15 February 2018	Powatahan Point Belmont County, Ohio, US	1 mile evacuation around site, no reported serious injuries or fatalities, well continued leaking for over 2 weeks.	Fox ²⁰
Site Explosion 22 January 2018	Nr Quinton, Oklahoma, US	5 workers killed	Reuters ²¹
Equipment failure 28 November 2018	Nr Watonga, Blaine County, Oklahoma, US	1 worker killed, 1 worker injured	OKEnergy today ²²
Abandoned infrastructure (pipeline) Leak 17 April 2017	Nr Firestone, Colorado, US	2 Residents killed	CBS ²³

Table 2 – some recent incidents in the US

The table above shows that

- Well site incidents are not uncommon
- even in countries where the industry is considered mature
- and the level of expertise is high
- It is noted that worker fatalities related specifically to fracking in 2014 numbered 12 in the US, according to the National Institute of Occupational Safety and Health (p16)²⁴
- although in the oil and gas industry as a whole fatalities were just over 100 for that year

¹⁸ <https://www.energeticcity.ca/2018/03/large-well-site-fire-causes-evacuation-sunday-morning-near-pouce-coupe/>

¹⁹ <http://www.kbtx.com/content/news/Local-crews-responding-to-large-Washington-County-gas-leak--476765833.html>

²⁰ <http://wtov9.com/news/local/well-pad-explosion-fire-forces-evacuations-in-powhatan-point-area>

²¹ <https://www.reuters.com/article/us-oklahoma-drilling-blast/five-missing-after-oklahoma-oil-and-gas-drilling-site-explosion-idUSKBN1FB2GY>

²² <http://www.okenergytoday.com/2017/11/oilfield-worker-killed-in-fracking-accident-in-blaine-county/>

²³ <http://denver.cbslocal.com/2017/05/03/firestone-home-explosion-5/>

²⁴ <https://www.cdc.gov/niosh/docs/2017-193/2017-193.pdf>

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Appendix 5

Explanatory Map and notes in relation to Kirby Misperton

Map annotated to show KM8 nearest receptors etc

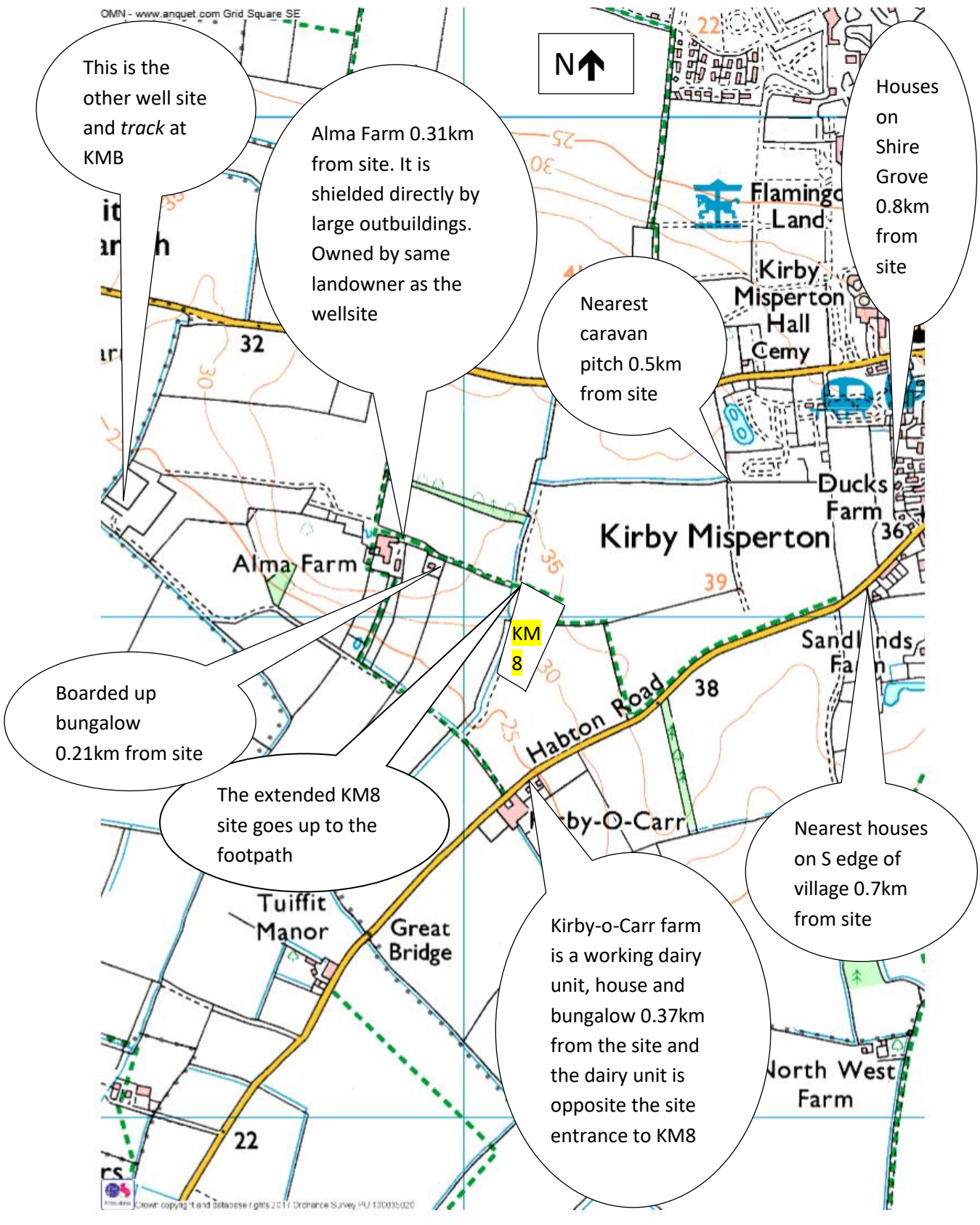


Figure 1 – Annotated map of Kirby Misperton Wellsite with KM8, and some receptors – derived from OS 1:25000 data but not reproduced at that scale.

Address	Approx distance from KM8 (km)	Grid reference	Notes
Alma Farm	0.31	SE768791	This farm is in the ownership of the same landowner as the wellsite with KM8 on it. The farm is rented out
Kirby-O-Carr Farm and bungalow	0.40	SE771786	This farm is in the ownership of a landowner who also has conflicting interests – they lease of other gas sites in the locality to the operator (Third Energy)
Nearest caravan pitch	0.50	SE775792	This is a seasonal site
First House on Habton Rd	0.70	SE778790	
Shire Grove	0.80	SE778792	Site of monitoring equipment (community)

Table 2 – Notes in respect of receptors shown on Figure 1. Note distances are expressed from the centre of the upper part of the wellsite to the nearest boundary of receptors

The annotated map is self explanatory.

Consider the brief modern history of the site

- the site was already a conventional gas site since the 1980's
- it was granted planning permission in 2012²⁵ to carry out a site extension and exploratory drilling to ~9000ft below the surface. The well drilled was then called KM-Deep and is now known as KM8
- the site extension and borehole drilling works were completed in 2014

So it was not a 'greenfield' site when permission was applied for and granted. Both Alma Farm and Kirby-O-Carr farm house and bungalow are within 500m of the well (KM8). Neither of the farms or the bungalow objected to the application to carry out hydraulic fracturing (including production for 9 years). Their residential amenity has been sacrificed to enable the development to go ahead. Note

- Alma Farm is in the same ownership as the wellsite on which KM8 is drilled. It is let as a residential property not a working farm
- Kirby-O-Carr Farm is a working farm and dairy unit. Relatives of the farmer also lease gas sites in the vicinity (Great Habton – just over 1.5 miles away) to the operators of the Kirby Misperton well sites

The main reason behind the closest receptors not making objections in respect of the planning application was due to this conflict of interest. Both properties have subsequently suffered negative impacts from site operations.

It must be recognised that these 2 properties have had their residential amenity sacrificed to enable the development to go ahead. It is noted that other receptors (except the very lowest part of the caravan site to the NE of the well site) would in fact be outside of a 500m separation zone.

²⁵ <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=8620>