Frack Free Notts'Response to exploratory drilling proposal by Dart Energy (East of England) for site at Tinkers Lane, Barnby Moor, Bassetlaw (ES/3524)

Frack Free Notts objects to the above proposal for exploratory and appraisal drilling for the following reasons:

Dart Energy/IGas :Background

1) IGas, as Dart's parentcompany, has been criticised in the recent past for overreliance on debt financing. Its revenues have also been reduced bythe fall in global oil prices and it has been operating at a loss. There is speculation in the financial press as to whether it can sustain such losses for the several years that itwould take to move to commercial production of shale gas, even on the most optimistic scenario that IGas presents. This is reflected in a steady collapse of itsshare price from a peak of nearly 150p in January 2014 to less than 20p since December 2015.

2) It appears that neither Dart norIGas has much experience of extracting shale gas at depth using high volume hydraulic fracturing technology in the UK. None ofthe gas-only sites listed on its website have made progress beyondexploratory drilling and all of the long established ones are for oil extractionwhich requires a relatively shallow drill and is far less environmentallydisruptive.

3) While shale gas exploration led by IGas in North East Bassetlaw (PEDLs139&140) is being funded in part by Total (a French oil and gas company), it is unlikely that Total will be taking legal or financial responsibility if anythinggoes wrong. Given the questions over IGas' financial integrity, it cannot beassumed that the company would be able to meet the cost of anyunforseen damages. Although there is provision in the National Planning Policy Framework for requiring a bond to be paid up front in suchexceptional circumstances (NPPF, para 144), FFN submits that it will be more appropriateavoid any risk by rejecting the application.

4) Experience of exploratory drilling by Dart Energy atDaneshill in 2013/14 demonstrated a cavalier attitude by the company towardplanning conditions, with a number of breaches observed by local people and taken up by the planning authority.In that case the company even started moving HGVs on to the site beforeconstructing the required access road. It should not therefore be assumedthat Dart Energy's operations can be adequately controlled by the regulatory bodies. Already at Tinkers Lane a site compound has been erected without planning permission which has infuriated local councilors.

Geology

5) It should be of concern to the planning authority that no 3-D seismic survey has yet been undertaken at the site, because in the absence of information about fault lines and uncharted coal mining activity etc, it will be difficult to properly assess the under land aspects of the proposed development. Local knowledge has indicated past working from Harworth Colliery across this area, so FFNurges that more information is requested from the applicant in order to ascertain the risks of deep drilling in this location.

Ecology and Site Selection

6) The proposed site is close to Mattersey Hill Marsh SSSI and also todesignated Local Wildlife Sites at Daneshill and Tinkers Lane (Barnby Moor). FFN has studied and agrees with the comments set out in the letter dated 3/6/16 from the NottinghamshireWildlife Trust (NWT). The letter identifies the potential detriment to the volume and quality of groundwater (see also para 26-7) in these protected areas and to habitat disturbance more generally.FFN shares the NWT's concern about the veracity of theprediction from Dart Energy's study of local ecology that there will be "no significant residual effects on valued ecological receptors" in the light of the paucity of survey work that has been undertaken in order to reach such a conclusion.

7) As a general point, given known accidents, leakages and failures of control documented at other wells in the US and UK, it is not appropriate or realistic to conclude, however detailed the assessments undertaken of the potential for damage to statutory and non-statutory sites "…that subject to the implementation of appropriate avoidance, control and mitigation measures, no significance adverse impacts are predicted to occur".

8)Dart's explanation of site selection in the Alternatives Reportclaims that it considered a variety of constraints (mainly as a desktop exercise) including accessibility by road, quality ofagricultural land, flood risk,proximity to residential property and Groundwater Source Protection Zones,but did not show which other individual sites were examinedor what weighting was applied to the constraints.

9) FFN agrees with the NWT that the lack of information provided by Dart means that the proposal is not compliant with provisions in the NPPF,particularly paras 109, 118 and 120or with a number of Minerals Local Plan Policies including M3.7 (Dust and AirQuality), M3.8 (Water Environment), M3.17 (Biodiversity), M3.19 (SSSIs)and M3.20 (Local Designated Sites).

Economic Costs and Benefits

10) Dart Energy argues that 'the longer term potential benefits' of possible futureproduction of shale gas should be given material weight even though it isacknowledged that the 'economic benefits' associated with the currentapplication are small.

11) FFN believes that the net long term economic benefits of industrialising therural areas of North East Bassetlaw will be negative. Indeed the net short termbenefits of approving exploratory drilling will also be negative as a result ofblight. Market evidence shows that there is little desire to purchase a home or set up a business in an area licensed for fracking. It follows that on economic grounds alone the application should be rejected. (See fuller arguments in Appendix 2 of FFN submission to Applic No. ES/3379 at Misson).

12) The draft DEFRA report 'Shale Gas: Rural Economy Impacts Paper' concludes that fracking "may reduce the number of visitors and tourists inthe rural area, with an associated reduction in spend in the local tourism economy." In addition it asserts that

“Shale gas may transform a previously pristine and quietnatural region, bringing increased industrialisation.”

13) This possibletransformation from a relatively quiet rural area into an industrialisedandpolluted one is a factor that could cause a significant reduction in propertyvalues. Even before that stage, as the Draft DEFRA Impacts Paper indicates, “House prices inclose proximity to the drilling operations are likely to fall. There could be a7% reduction in property values within one mile of a site”. This could be an understatement. FFN believes that the blighting effect of this proposal could be more far-reachingbecause of a real prospect of further exploration and then more intensive appraisal and production activity in thearea, with consequential loss of residential amenity.

Traffic

14)The proposed fracking site will directly and adversely traffic levels and conditions upon the A634 (Retford Road) between Blyth and Barnby Moor, and within Blyth.With total estimated vehicle movements of 14,500 associated with the exploratory drill, officers and members of the County Council cannot rely upon Dart Energy’s assertion in its Planning Support Statement that “the site will generate a reasonably low number of vehicles across a temporary period”. And, in view of the limited mitigation proposals, they should refute its conclusion that “the site does not result in an unacceptable effect on road or junction capacity, driver delay, road safety or amenity.”

15)The HGV route, which will give rise to some 8,824 lorry movements over the lifetime of the site, will worsen noise, pollution and dangers to other road users in Blyth High Street which has several small traffic junctions, and along the relatively narrow B6045 to the A1 north. On the Retford Road, it will take vehicles carrying toxic wastedirectly past Blyth Primary School.

16) As well as increased noise levels, this type of lorry traffic can lead to greater air pollution from dust and traffic fumes, from vibration affecting homes, farmsand public buildings, and from damage to verges and pavements. There willalso be a greater risk of traffic delays and accidents for children, pedestrians, cyclistsand horse riders, especially in Blyth and Nornay and probably, but to a lesser extent, in Barnby Moor.

Landscape and Visual Impacts

17) It is clear that that the proposed drilling rig at some 50m high*(check)*on elevated land will be prominent from distance across the local landscape, especially when illuminated during night operation (indeed 24 hour operation during the drilling phase). Whilst the lowest parts of site will be screened by fencing and woodland, the remainder will constitute an alien feature and will create more than the “moderate”impact that Dart claims.

18) FFN suggests that views across theRyton and Idle valleys will be dominatedby the

rigwith parts of South Yorkshire beyond Blyth being affected as well as villages such as Ranskill, Lound, Mattersey and Everton. To the south-east, the rig will be visible fromparts of Retford which is the largest settlement in the area. Also, it will be seenby hundreds of travellers on the nearby A1 and East Coast mainline railway.

19)Consequently it is not appropriate for Dart to conclude that "there will be no significant landscape or visual effects as a result of the proposed development and that it is therefore acceptable in landscape and visual terms." For all of these surrounding villages, views of the rig will be a constantreminder that the whole area is threatened with a potential proliferation offracking activities.

Noise and Vibration

20) Noise levels from the site will be at their highest during the construction and rig mobilization phases (24/7) and may carry across the local area for severalmiles in all directions, with disturbance, including vibration and possible seismic activity(where faults are located), felt in neighbouring villages and farms. The site is within 4km of Blyth, Ranskill, Tolworth, Barnby Moor and Sutton-cum-Lound, thusadversely affecting a range of homes and local businesses.

21) If well site construction and restoration takes place from 07.00 to 19.00 onweekdays and till 13.00 on Saturdays, this will create considerabledisturbance in a quiet part of the countryside, even if acoustic screening isin place.Certainly maximum noise levels of over 70dBA at the nearby plantation and higher than this along some of the nearby hedgerows, may cause serious disturbance to any birds and bats making use of this habitat, particularly when the effect of 24 hour lighting is added. No proper assessment seems to have been made of the impact on wildlife, which iscontrary to guidance in the NPPF and contrary to Minerals Local Plan policies.

22) Noise from 8,824 HGV movements is described by Dart Energy as "barely noticeable", but this is unlikely to be the experience along the route. Furthermore, noise from 5,680 light vehicle movements appears to have been ignored in thisanalysis even though this figure seems likely to be an under-estimate and many of the journeys will be through Blyth or Barnby Moor.

Air Pollution

23) Sources of air pollution will include vehicle movements, particularly the 8,824 HGVs, an unspecified number of large, containerized diesel generators plus smaller rig generators and the venting/flaring of waste gases. This will lead to unavoidable increases inNOx, particulates, volatile organic compounds (some carcinogenic and/ormutagenic) and dust across the site and beyond. This will be of mostconcern for the health and safety of workers on site and for species in thesurrounding area including those at the nature reserve and local wildlife area at Daneshill Lakes.

24) FFN suggests that Dart Energy has failed to adequately assess theimpact of potential air pollution and dust on these areas and theMattersey Hill Marsh SSSI. It has

howeveracknowledged that it will cause a significant increase in NOx and aciddeposition locallywhich will add to critical load levels already exceeded. This is viewed as unacceptable.
25) It should be noted that a lot more air pollution is likely if, as intended, Dart should progress beyond the proposed exploratory and appraisal activities to a production phase of hydraulic fracturing. (See Appendix 3 of FFN's Misson objectionfor a summary of some ofthe emerging evidence of problems associated with 'gas field haze', carcinogenic hydrocarbons, silicon dust, 'fugitive methane', etc, associatedwith unconventional gas extraction).

Water Pollution

26) FFN questions the efficacy of Dart's assessment which concludes that "the proposed development would not impair the wholesomeness of groundwater or surface water, affect water abstractions, recreational users or ecological habitats dependent on ground or surface water, nor affect designated ecological sites near to the Application Site". The very cursory assessment of the geology affecting the water environment undermines theEU Water Framework Directive which requires a precautionary approach to protect groundwater from contamination. FFN believes thatthis precautionary principle should be a key factor in seeking more information/assurances from the applicant and potentially in rejectingthis proposal.

27) The site is close to the edge of an aquifer with a Source Protection Zone (1 &2)east of Barnby Moorused for drinking water supplies.Independent studies show that there is no guarantee that aquifers will not be contaminated by spills or leaks, either during drilling/production or at some time in the future. Water contamination could occur through surface spillages or through wellcasing and cement seal failures. Most cement seals fail eventually and around 6% within a year, allowing migration of contaminants vertically-thus potentially polluting groundwater.

28) The Pressure Determination Test in particular gives cause for concern as it may include a significant amount of flowbackwater containing contaminants including radioactive material, heavy metalsand carcinogenic hydrocarbons such as benzene.There is potential for such materials to migrate along fault lines underground.

29) If surface water and groundwater near the surface migrates west to east,it will steer any pollution towards Daneshill Lakes, the River Idleand associated drains. FFN feels that Dart has failed to adequately assess thepotential for this pollutionand also for any reduction of water levelsin the lakes.

NB. It should be noted that if exploratory drilling leads to full scale fracking, this would require substantial quantities of water – in an area where over-abstraction means that no furtherabstraction licences will be available. So water will have to be tankered inor piped in at considerable environmental cost.

Climate Change

30) Development plans are required to include policies to “contribute to the mitigation of, and adaptation to, climate change” (Planning Act 2008, s182,reflected in NPPF para 93 and Policy SP4 of the emerging Notts MineralsLocal Plan). Evidence suggests that shale gas production typically results in methane leakage of around 6% while any leakage above 3% makes shale gas worsethan burning coal in respect of greenhouse gas emissions.

31) The report by Committee on Climate Change has recommended that these emissions require major mitigation with three tests being met. The Government has accepted this approach but without specifying how and when it can be achieved, although it is certainly not in the short-to-medium term. Thus, with current fracking technology, shale gas production shouldbe considered incompatible with the legal requirement to reducegreenhouse gas emissions, and with a policy emphasis on a decarbonized UK energy mix,the exploration and appraisal of unconventionalhydrocarbons should also be considered unnecessary and harmful.

Public Health

32) The most comprehensive analysis of public health implications of fracking is the Compendium produced by Concerned Health Professionals of NewYork (see Appendix 3). This reviews a wide range of peer-reviewed studiesdemonstrating a wide range of health problems associated withunconventional hydrocarbons.Also, the revised MEDACT report (7/16) has highlighted the various potential impacts onlocal populations in the UK.

33) While Dart Energy’s proposal is not for actual shale gas production, and willtherefore not in itself cause the scale of problems documented in parts ofthe US, this evidence will add to the anxiety of people in the surroundingarea confronted by the ongoing prospect of blight. The proposal should thus be rejected on public health grounds.

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