

CM4/0517/10: Planning Application for a Vertical Hydrocarbon Exploratory Core Well, Land Adjacent to Bramley Moor Lane, Near Marsh Lane
Objection to Application
Lee Rowley MP

Summary of objection

I consider the application to be inappropriate for the area proposed and not compliant with key planning policies in the following areas:

- Substantial increase in traffic on a rural road network;
- Significant impact on the nearby Moss Valley conservation area;
- Unacceptable harm to the character and openness of the Green Belt;
- Dramatic change to the character and rural nature of the landscape;
- Potential impact upon the environment, biodiversity and nature within Bramley Moor;
- Unacceptable impact upon, and loss of, hedgerow;
- Potential archaeological significance of the site;
- Potential disturbance of in-situ industrial heritage;
- Unacceptable loss of fertile agricultural land;
- Uncertainty regarding previous mining extraction on site or nearby;
- Light egress within a rural area;
- Potential air pollution, and;
- Other potential concerns not adequately dealt with by the application.

Further, given the purpose of exploratory drilling is to assess for the potential to undertake hydraulic fracturing, the cumulative impact of any future production activity must also be a consideration in determining this application. This cumulative impact should cover both the full industrial development of the rural Bramley Moor Lane site and also the impact on the wider area in a scenario of full-scale fracking – described by the applicant in other documents as having the potential to create 30 separate Bramley Moor Lane-equivalent sites in a ten kilometre radius.

The need to take account of cumulative impacts

Before discussing the detail of the application, the Council must determine the scope of its assessment and the policies that will apply.

The applicant has stated their view that this proposal should be dealt with in isolation and unrelated to any subsequent use of the Bramley Moor Lane site or the potential cumulative impact on the wider area¹. This assessment is incorrect for the following reasons:

- Derbyshire Minerals Policy clearly states that proposals should be considered cumulatively to confirm that no unacceptable environmental impact will follow either on the specific site or across a wider area – an assessment that can only be made, by definition, through consideration of production as well as exploration stages²;
- The NPPF places a duty on local planning authorities to ensure they take into account the cumulative effect of sites and their surrounding area³, and;

¹ Ineos, “Our Proposals Explained”, 7.

² Derbyshire County Council, “Derby and Derbyshire Minerals Local Plan”, MP4: “Proposals for mineral development will not be permitted ... in particular where: development would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of mineral developments occurring either concurrently or successively.”

³ NPPF, Section 144: “When determining planning applications, local planning authorities should ... take into account the cumulative effect of multiple impacts from individual sites and / or from a number of sites in a locality”

- Case law confirms that potential future planning applications should be given weight in considering a current planning application⁴.

Beyond the planning policies, additional evidence exists that exploration cannot be divorced from production:

- the Petroleum Exploration licence by which this exploratory drilling is granted explicitly includes the ability to “*get*” petroleum rather than simply “*search and bore*”⁵ – meaning that one is likely to follow the other, and;
- other literature issued by the applicant (in this case for tendering purposes) clearly link exploration with production⁶.

Given this context, the application under consideration should be considered not simply for exploratory drilling but also the cumulative impact of hydraulic fracturing on the Bramley Moor Lane site. In addition, consideration must also be given to the cumulative impact of hydraulic fracturing within the wider area. Ineos themselves have outlined the possibility of up to 30 separate well sites (equivalent to 30 Bramley Moor Lanes) across a 10 kilometre area in North Derbyshire⁷.

Substantial increase in traffic on a rural road network

By the applicants own admission, the proposal for exploratory drilling would:

- Increase overall movements in the vicinity by c70 on a daily basis;
- Increase HGV movements in the vicinity by c60 on a daily basis;
- Result in each of these HGVs pass by approximately 1.5 miles of residential frontage in Coal Aston;
- See an overall increase, by the applicant’s calculations, of HGV movements of c17%;
- Result in, potentially, more than 14,000 traffic movements during the 5-year proposed operational period, and;
- Mandate some reconfiguration of road layouts in Coal Aston⁸.

The above considerations demonstrate that the proposal contradicts policies MP1, MP8 and MP12 of the Minerals Plan and T2 of the NEDDC Saved Policies. In particular, the application does not propose a site which can accommodate the anticipated traffic easily (T2); it does not demonstrate that it has dealt adequately with road safety or highway capacity (MP4 / 5) and it fails to confirm that it will not create unacceptable traffic problems (MP12) given the significant increase in traffic proposed.

The preferred route for vehicle movements includes roads that are entirely inappropriate for increased HGV movements and which Derbyshire County Council’s own character assessment define as tending to be “*narrow and winding*”⁹ meaning, as a result, a substantial increase of HGV traffic posing an unacceptable level of risk to other road users. The proposed route includes Dyche Lane, a narrow, undulating road with limited visibility at points due to banks on either side of the road. To turn onto Eckington Road, HGV traffic would need to traverse a mini-roundabout. Eckington Road is narrow and to accommodate parked cars can only be navigated in single file at multiple points – something which is acceptable given the types and volumes of vehicles using of the road currently.

⁴ *Carroll vs Secretary of State*, 2016

⁵ https://itportal.ogauthority.co.uk/web_files/recent_licences/licences/PEDL300.pdf, 3.

⁶ Ineos, “*Invitation to Tender*”. See Appendix 1

⁷ Ineos, “*Invitation to Tender*”. See Appendix 1

⁸ Ineos, “*Planning Statement*”, 21

⁹ Derbyshire County Council, “*Part One: Landscape Character Definitions. 4. Nottinghamshire, Derbyshire and Yorkshire Coalfield*”, 4.6

The application states that there are “no road safety issues on the links or at the junctions that could be exacerbated by the proposal”¹⁰. Their own document, however, identifies seven collisions over a three-year period in the roads proposed to be utilised. Given the application is for up to five years, a more accurate assessment would be for the same period; this shows three serious and twenty-three slight collisions during the period, before significant additional HGV traffic is added through this application¹¹.

Further, an adjacent site has already been rejected for planning permission in the last ten years on the basis of traffic. Application 08/00038/FL in 2008 (to convert land west of Bramblemoor Lane to be used for a car boot sale), was refused on the basis that the traffic generated would create “visual intrusion” in the green belt, would be in an “unsuitable location” and would contravene policy T2 of the Saved Policies¹². The car boot would only have been operational fourteen days per annum as opposed to traffic generated for exploratory drilling over 240 days per year.

Separate from the above, the application also relies upon traffic generation calculations which appear irregular in their use of data. The application is based upon an assessment of existing traffic along the key routes of Eckington Road and the B6056 and the likely impact of additional traffic from this application. The assessment suggests increases of 14% and 17% in HGV traffic, both of which are below the 30% trigger for further analysis and more detailed investigation¹³. The applicant is being inconsistent in their definitions; “HGV” is defined by the applicant as greater than 7.5 tonnes for the additional traffic being generated¹⁴. When analysing existing movements, HGV traffic includes two-axle trucks and buses which would not necessarily be over 7.5 tonnes¹⁵. As a result, the potential increase in true HGV traffic (defined as > 7.5 tonnes) is being diminished because of the inclusion of smaller vehicles in the baseline.

Further, Department for Transport guidelines have previously classified traffic impacts on an area as being “high” if the increased traffic passes by over 200 houses and “moderate” if the number is between 100 and 200. In this instance, there are over 110 houses on Eckington Road, Coal Aston, another c100 on the roads next to the Dyche Lane roundabout (Wilson Road, Thorpe Avenue etc.) and a further dozen or so farms between Coal Aston and the site. On that basis, this application should be viewed as having a “high” impact and further traffic assessments would be necessary prior to any decision.

Given the lack of clarity regarding these traffic assessments and the apparent inconsistencies in the treatment of the denominator used for movement analysis, this application should also be rejected on the basis of incomplete information.

Finally, if the application is considered from a cumulative perspective, then the proposed development should also be deemed unacceptable and contravene policy MP4 of the Derby and Derbyshire Minerals Local Plan¹⁶. Consideration must also be given to further traffic and road safety implications which may arise from possible future hydraulic fracturing in the area, as suggested by the applicant. An application to explore for shale gas in Lancashire in 2014 saw predictions of up to

¹⁰ Ineos, “Environmental Report”, 3-8

¹¹ www.crashmap.co.uk. Assessment between 2012 and 2016 of Dyche Lane (8 collisions), Eckington Road (9 collisions), Snowden Lane (5 collisions), the junction of Snowden Lane (3 collisions) and the B6056 (between Bramblemoor Lane and Long Lane) (1 collision).

¹² <http://planapps-online.ne-derbyshire.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=JUN3ASLI03L00>

¹³ Ineos, “Environmental Assessment”, 3-11

¹⁴ Ineos, “Environmental Assessment”, 3-9, Table 3.4

¹⁵ Assessing site (3) shows 12 HGV movements on an average day which includes 11 TB2-type vehicles and 1 ART3-type vehicle (see Environmental Assessment, p.359). TB2-type vehicles are two-axle trucks and buses (see Ineos, “Environmental Assessment”, 369)

¹⁶ “Derbyshire County Council, Derby and Derbyshire Minerals Local Plan”, MP4: “Proposals for mineral development will not be permitted ... in particular where: development would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of mineral developments occurring either concurrently or successively.”

274 HGV movements a day¹⁷. Should Ineos's predictions of future hydraulic fracturing come to fruition, then the HGV traffic generated could result in similar numbers of HGV movements per drill-site and which then would need to be multiplied by up to thirty to account for multiple sites in the immediate area, as per the applicant's own documentation on full fracking. Such a scenario could result in up to 8,000 traffic movements a day and would clearly be wholly inappropriate for a road network of this type.

Significant impact on the nearby Moss Valley conservation area

The proposed site is within approximately one hundred metres of the Moss Valley conservation area¹⁸. Planning policy is clear that the impact of an application should be considered not just when that application is specifically within the conservation area but also when it is adjacent – as in this case¹⁹. Similarly, policy states that permission can be granted only if the application takes account of that conservation area. This application fails to take account of its proximity to the Moss Valley conservation area given its scale, form, siting and design.

The proposed site for exploratory drilling is at the top of a moor which is prominently visible across the Moss Valley. Not only would a 60m drilling rig contradict the Saved Policies of NEDDC Local Plan by blighting this area for a number of months, but the five-year accumulation of bulky items on the site would cause a long-term impact on this unique landscape. During Stage 3 of the proposed development (a stage which could last up to five years), the site could hold up to seventeen different bulky and highly visible sets of equipment which it would simply not be possible to obscure based on the existing natural features of the site:

- A perimeter 2.0m high fence;
- An additional 4.8m high combination of bunding and further fencing;
- 2 – 3 cabins of up to 3.0m height;
- Acoustic screening of up to 5.0m height;
- Up to 4 security cameras of up to 5.5m height;
- A lighting rig of up to 9.0m high;
- A 2.9m high power generator;
- 2 water tanks of up to 3.0m height;
- A 10m high emergency vent;
- A 4.5m high Kooney pressure control, and;
- A 4.0m high blow out preventor and skid and choke manifold²⁰.

This bulk would be clearly visible from multiple locations across the Moss Valley conservation area and would be easily visible even from further distances such as High Lane at the top of Ridgeway.

The proposal would also be contrary to Policy MP4 of the Derby and Derbyshire Minerals Local Plan, which states that applications should be refused if the proposal will *"cause significant disturbance to other sites and features of heritage importance including conservation areas"*.²¹

In addition, considering cumulative future impact, the potential for up to thirty sites nearby would have a significant impact on Conservation Areas and should be rejected on this basis.

¹⁷Cuadrilla, "Environmental Statement", 2014, 562

¹⁸Ineos, "Environmental Report", 8-5

¹⁹NEDDC "Saved Policies", BE11: "Proposals for development within or adjacent to a Conservation Area should preserve or enhance the character of the Conservation Area."

²⁰Ineos, "The Proposal", 26

²¹Derbyshire County Council, "Derby and Derbyshire Minerals Local Plan", MP4

Unacceptable harm to the character and openness of the Green Belt

The application is within an area of Green Belt and thus, according to planning policy, applications should only be approved in “*very special circumstances*” and when they do not conflict with the original purpose of the Green Belt designation²². Further, the same policy states that the Green Belt should not be injured and that applications must not be conspicuous. The NPPF and the NEDDC Emerging Local Plan are equally as stringent towards applications within Green Belt and their potential to impact the openness and character of such areas²³. This application contravenes all of these policies.

The National Planning Policy Framework is clear that the purpose of Green Belt policies are, amongst others, to “*assist in safeguarding the countryside from encroachment*”²⁴. By any definition this application, through the imposition of over a dozen bulky items, through the removal of agricultural land, through the cutting down of mature hedgerow, through the concreting over of 1.87 hectares of green belt land and for all of other the reasons outlined in this application, clearly contravenes this purpose.

Secondly, the application also severely impacts on the “*openness*” of the Green Belt in North East Derbyshire. “*Openness*” has been defined in case law as the “*state of being free from built development, the absence of Buildings*”²⁵. For the same reasons as outlined above, this application would contravene these Green Belt principles.

Given that the application clearly contravenes both the principle and spirit of Green Belt designation, the question then turns to whether this particular application meets the “*very special circumstances*” that would allow it to proceed. There is no evidence in the applicant’s documentation that such circumstances exist. The harm that would result to the Green Belt would be clearly outweighed by any benefit and, given that the PEDL licence from which this application emanate covers both Green Belt and non-Green Belt locations, it cannot be argued that there would not be other locations which could be considered that would avoid the transgression of the Green Belt principle (although, of course, all locations within the North Derbyshire area are likely to have significant issues with regards to changing the character of the local landscape in the event of a fracking application).

It is also important to note that a similar planning application in 2014 for exploratory drilling in Calow was refused by the Planning Committee at Derbyshire County Council (CM4/0114/156). The reasons for the refusal of the Calow application²⁶ and the policies contravened must also be applied to the proposed development adjacent to Bramley Moor Lane as follows:

- the Calow development was unacceptable due to its location in the countryside, and the cumulative impacts on the local community, including the associated traffic, which outweighed the benefits of the development, contravening policies MP1 and MP3 of the Derby and Derbyshire Minerals Local Plan, and;²⁷

²² NEDDC, “*Saved Policies*”, GS2

²³ NPPF, para.88: “*When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt*”; NEDDC, “*North East Derbyshire Local Plan 2011 - 2033*”, SS9: “*Within the North East Derbyshire Green Belt ... inappropriate development will not be approved except in very special circumstances and when the potential harm to the Green Belt is clearly outweighed by other material planning considerations*”

²⁴ NPPF, para.80

²⁵ R (Lee Valley Regional Park Authority) v Epping Forest DC [2016]

²⁶ DCC Decision Notice (CM4/0114/156)

²⁷ Derbyshire County Council, “*Derby and Derbyshire Minerals Local Plan*”, MP1 *The Environmental Impact of Mineral Development*, 1,3,4; MP3 *Measures to Reduce Environmental Impact*,1

- the Calow development was within an area designated as a Derbyshire Landscape Character type and would be impacted should the application be approved, contravening policy GS6 of the NEDDC Saved Policies²⁸

The same points apply to this application.

Dramatic change to the character and rural nature of the landscape

The application, if successful, would result in a significant change to the Bramley Moor site from a rural and agricultural landscape to one which has a significant amount of industrial activity and which is clearly visible from elsewhere in the District.

Bramley Moor sits within the Wooded Hills and Valleys landscape area where *“the landscape has remained essentially rural and intact”*²⁹. According to NEDDC’s own assessment of the area, the north of the district is *“a landscape of villages, hamlets and scattered farmsteads”*³⁰. The site itself has had the same characteristics for centuries as evidenced from nineteenth century Ordnance Survey maps as well as the applicants own submissions³¹.

Significant change to the use of this area for industrial and mineral extraction would contravene a number of policies. The National Planning Policy Framework is clear that local planning authorities should *“retain and enhance landscapes”*³². Policy SDC3 of the emerging NEDDC Local Plan states: *“Development proposals should be informed by, and be sympathetic to, the distinctive landscape areas identified in the Derbyshire Landscape Character Assessment”*³³. Policy GS6 of the Saved Policies states that development will only be permitted when it is *“in keeping with the character of the countryside”* and when it does not *“represent a prominent intrusion”* into the countryside³⁴. The application fails to adhere to all of the aforementioned policies and so should be rejected.

Potential impact upon environment, biodiversity and nature within Bramley Moor

The applicant states that the proposed development will have minimal ecological impact in their Environmental Report and that the habitats involved should be considered of *“low to moderate”* ecological value³⁵. There is, however, reason to believe that the habitat assessment is not comprehensive enough to support absolute confirmation.

There are erroneous elements to the habitat survey within the Environmental Report, which need to be addressed:

- The size of the field survey area is not specified³⁶;
- Bat roosts are located in the survey area but locations are not provided³⁷;

Given there is no information about the proximity of the documented bat roosts to the proposed site, no accurate judgement can be made about the impact of the proposal on the local bat population.

²⁸ NEDDC, “Saved Policies”, GS6: *“In the countryside, new development will only be permitted where: (b) it is in keeping with the character of the countryside”*

²⁹ Derbyshire County Council, *“Part One: Landscape Character Definitions. 4. Nottinghamshire, Derbyshire and Yorkshire Coalfield”*, 4.6

³⁰ NEDDC, *“Historic Environment Study: 1. The Constrained North”* 2012, 6

³¹ Ineos, *“Environmental Report”*, 8-7

³² NPPF, para.81

³³ NEDDC, *“North East Derbyshire Local Plan 2011 - 2033”*, 162

³⁴ NEDDC, *“Saved Policies”*, GS6

³⁵ Ineos, *“Environmental Report”*, II

³⁶ Ineos, *“Environmental Report”*, 4-5

³⁷ Environment Agency Screening Report, p.11; Ineos, *“Environmental Report”*, 4-5

The habitat survey also is not comprehensive enough in its investigation into possible bat activity in the area for the following reasons:

- The survey was undertaken in January and February, when bats are in their hibernation; phase and activity outside of roosts is rare³⁸;
- The survey does not consider potential for bat roosting with enough weight, and;³⁹
- The survey does not include an assessment for potential “commuting” and “foraging” areas for bats⁴⁰.

Policy is very clear with regards to protecting species. The Emerging NEDDC Local Plan states: *“Development proposals will not be permitted where they would result in significant harm to biodiversity or geodiversity, including protected species and sites of international, national and local significance, ancient woodland, and species and habitats of importance identified in the United Kingdom and Derbyshire Biodiversity Action Plan”*⁴¹. It is not clear whether the proposed development would result in significant harm to protected species because the results of the habitat survey are not comprehensive enough to establish a) whether there is bat activity within the proposed development site, and b) whether there is an significant impact on local bat populations.

If the application is considered from a cumulative perspective, then the proposed development should be deemed unacceptable and contravene policy MP4 of the Derby and Derbyshire Minerals Local plan⁴². There is evidence of bats within the surrounding area of the proposed site, and any further possible development, including hydraulic fracturing, would have an unacceptable impact on the local ecology.

Unacceptable impact upon, and loss of, hedgerow

Hedgerow is accepted as a key characteristic of the landscape in the North Derbyshire area⁴³. The applicant has confirmed that this proposal will result in the loss of existing, mature hedgerow⁴⁴ which they admit could be classified as *“important”*⁴⁵. The hedgerow in question is likely to have been in situ since the Enclosure Act of 1795 and, in all probability, is significantly older as a boundary associated with the road across Bramley Moor. Applying academic models to assess the age of the hedgerow closest the B6056 suggests that elements could be many hundreds of years old⁴⁶ and, therefore, should be treated as ancient until comprehensively disproven.

³⁸ http://www.bats.org.uk/pages/a_year_in_the_life_of_a_bat.html

³⁹ http://www.bats.org.uk/publications_download.php/1327/Bats_and_Lighting_EStone_2014.pdf [Research by Bristol University suggests that bats need a variety of places to roost and select different types of roosts at different times of year (Walsh and Gunnell, 2014)].

⁴⁰ http://www.bats.org.uk/publications_download.php/1327/Bats_and_Lighting_EStone_2014.pdf [Bats are known to “commute” to their foraging sites and often stick to similar routes. Connectivity of habitat and foraging areas to roosts is fundamental to the survival of many bat populations (Verboom and Huitema, 1997). Lighting schemes can damage bat foraging habitat directly through loss of land and spatial exclusion of bats due to high illuminance, or indirectly by severing commuting routes from roosts, through light spillage polluting hedgerows, tree lines and watercourses (Racey, 2006)].

⁴¹ NEDDC, “North East Derbyshire Local Plan 2011 - 2033”, SDC4

⁴² Derbyshire Council County, “Derby and Derbyshire Minerals Local Plan”, MP4: “Proposals for mineral development will not be permitted ... in particular where: development would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of mineral developments occurring either concurrently or successively.”

⁴³ The Wooded Hill and Valleys landscape area includes “ancient woodland and mature hedgerow trees are a key characteristic in this landscape type”. Derbyshire County Council, “Part One: Landscape Character Definitions. 4. Nottinghamshire, Derbyshire and Yorkshire Coalfield”, 4.6

⁴⁴ Ineos, “Planning Statement”, 35

⁴⁵ Ineos, “Environmental Report”, 4-8

⁴⁶ Application of Hooper’s Rule using the list of species provided in Ineos’s own assessment of flora and fauna on site, “Environmental Report”, 4-6

All of the local planning policies which will be used to determine this application confirm the importance of hedgerow preservation in planning policy⁴⁷. In particular, policy NE7 of the Saved Policies states unambiguously that *“planning permission will not be granted for development that would have a direct or indirect detrimental effect on ... important hedgerows”*. The removal of at least 18 metres of existing, mature and important hedgerow would clearly contravene this policy.

In addition, the application also suffers from the following shortcomings with regard to the potential loss of hedgerow:

- Inability to quantify the amount of hedgerow that will be directly lost both near the road and within the site (diagrams suggest at least 18m will be removed to create an access point to the B6056);
- Inability to guarantee that the hedgerow immediately surrounding the site will be retained (instead that the hedgerow will be retained *“where possible”*⁴⁸), and;
- A suggestion that a further c400 metres of existing, mature and potentially important hedgerow will be reduced in size to a maximum of 1 metre high to support the visibility splay needed for site access.

The transformational nature of this application on the hedgerow in or near the site is a clear and explicit reason for rejection based on the unacceptable impact on the character and amenity of the area and a failure to protect valuable and mature ecological assets.

If the removal of at least 18 metres of hedgerow occurs from this application, then consideration needs to be given to the possibility of further loss to hedgerows should hydraulic fracturing applications follow in the wider area. Ineos predict a potential of 30 similar drills sites in a ten kilometre radius of Bramblemoor Lane. The cumulative impact of this could result in hundreds of metres of hedgerows and habitats lost.

Potential archaeological significance of the site

North Derbyshire is a potential site of archaeological significance with known Roman settlements in Chesterfield and evidence of iron smelting in Eckington itself. Roman coins have been found within five miles of the site and, as a result, it must be a possibility that the site will have material of archaeological significance within it which should be treated with respect and care.

Given that the proposal for exploratory drilling involves the wholesale removal of the topsoil in the relevant area, it inevitably follows that any items of historical importance within it will be disturbed or potentially damaged during the transfer. In addition, the movement of the topsoil will also immediately destroy any information which could be gleaned from the distribution of any finds in the soil.

All of the relevant planning policy documents highlight the importance of treating sites of potential archaeological significance with caution. In particular, multiple policies stress the importance of the

⁴⁷ NEDDC, “Saved Policies” NE7: *“Planning permission will not be granted for development that would have a direct or indirect effect on ... important hedgerows”*; NEDDC, “North East Derbyshire Local Plan 2011 - 2033”, SDC2: *“Development that would result in the unacceptable loss of, or damage to, or threaten the continued well-being of... hedgerows .. will not be permitted”*; NEDDC, “North East Derbyshire Local Plan 2011 - 2033”, ID1: *“New development proposals shall, where appropriate: ... (h) Protect ... hedges”*; Derbyshire County Council, “Derby and Derbyshire Minerals Local Plan”, MP1: *“Proposals for mineral development will be permitted provided that their impact on the environment is acceptable having regard to ... 4) the effect on the character and quality of the landscape including the effect on ... hedgerows”*; National Planning Policy Framework para.81: *“local planning authorities should plan positively to enhance the beneficial use of the Green Belt ... to retain and enhance landscapes, visual amenity and biodiversity”*

⁴⁸ Ineos, “Planning Statement”, 35

preservation of potential archaeological finds “*in situ*” which would be rendered instantly impossible at the point topsoil was moved⁴⁹.

In addition:

- The gradiometer and GPR survey conducted on the proposed site identified large traces of ferrous disturbance, particularly along the boundaries and hedgerows⁵⁰, suggesting presence of iron which may have a link with the historical smelting in Eckington, and;
- The application does not contain an archaeological evaluation and impact assessment which, according to Minerals Policy MP7, is required prior to the determination of an application in an area of potential archaeological importance⁵¹.

Potential disturbance of in-situ industrial heritage

Evidence of a historic tramway can be found close to the proposed development site⁵², part of an old track which transported minerals from the Bramley Moor Colliery to the Chesterfield Canal.

The Environmental Report provided by the applicant goes as far as suggesting that the tramway is part of the historical importance of the area⁵³. Despite this, the tramway has been disregarded in the Environmental Report as “*negligible heritage value*”⁵⁴. The Environmental Report is therefore inconsistent and should not be used as an arbiter of the potential heritage value of the site.

Nearby in Eckington, traces of the same tram network have been preserved as areas of archaeological importance⁵⁵. If the same tramway is preserved just miles down the road, it would be counter-intuitive to permit a known tramway site of potential historical interest to be destroyed through the wholesale transfer of soils to accommodate use in exploratory drilling.

Such inconsistencies in preserving archaeologically important areas directly contradicts policy set out in the Derby and Derbyshire Mineral Local Plan MP1⁵⁶, as well as NEDDC Saved Policies and NEDDC Emerging Local Plan SDC7, as already noted. NEDDC’s own “*The Constrained North*” document of 2012 explicitly promotes the “*opportunity*” of disused and dismantled tramways to highlight the area’s industrial past and encourage use in leisure and recreation activities⁵⁷.

Unacceptable loss of fertile agricultural land

The policy framework is clear that development will only be permitted where, according to the Saved Policies, it “*minimises the loss of agricultural land, particularly that of the best and most*

⁴⁹ NEDDC “*Saved Policies*”, BE6: “*Significant sites of archaeological importance should be preserved in situ*”; NEDDC, “*North East Derbyshire Local Plan 2011 - 2033*”, SDC7: “*Where development proposals are likely to affect non-designated archaeological sites, appropriate measures should be taken to ensure their protection in-situ*”; Derbyshire County Council, “*Derby and Derbyshire Minerals Local Plan*”, MP1: “*Proposals for mineral development will be permitted provided that their impact on the environment is acceptable having regard to: 6) the effect on sites of archaeological importance and their settings*”

⁵⁰ Wessex Archaeology Detailed Gradiometer and Ground Penetrating Radar Survey Report, 6

⁵¹ Derbyshire County Council, “*Derby and Derbyshire Minerals Local Plan*” MP7: “*Where proposals for mineral development would affect areas of known or potential archaeological importance, the mineral planning authority will require the submission of an archaeological evaluation and impact assessment*”

⁵² Ineos, “*Environmental Report*”, 8-2

⁵³ Ineos, “*Environmental Report*”, 8-2

⁵⁴ Ineos, “*Environmental Report*”, 8-12

⁵⁵ <https://historicengland.org.uk/listing/the-list/list-entry/metres4601>; <https://www.youtube.com/watch?v=5D385GMhj4k>

⁵⁶ Derbyshire County Council, “*Derby and Derbyshire Minerals Local Plan*”, MP1: “*Proposals for mineral development will be permitted provided that their impact on the environment is acceptable having regard to: 6) the effect on sites of archaeological importance and their settings*”

⁵⁷ NEDDC, “*Historic Environment Study: 1. The Constrained North*” 2012, 43.

*versatile quality*⁵⁸. Similar requirements are also noted in the Emerging Local Plan and the Minerals Policy⁵⁹.

The immediate area nearby may become more difficult to farm as a result of this application. The applicant accepts that the location comprises “*intensively farmed arable land*”⁶⁰ and it is site which has been used for that purpose for many centuries – with early twentieth century records noting its use for arable and pasture, and an 1840 Ordnance Survey map denoting the same⁶¹.

The applicant accepts that the land is of grade 3 agricultural quality⁶² but does not choose to assess whether it is sub-grade 3a or 3b. Given that Minerals Policy MP4 is clear that the loss of grade 3a land should be avoided, this application does not provide sufficient detail to enable determination. It should be refused on this basis.

Further, the general quality of agricultural land within the North East Derbyshire district area is around two-thirds grade 4⁶³. Given this wider context, the proposal to remove nearly 2 acres of grade 3 agricultural land (irrespective of whether the land is eventually adjudged to be grade 3a or 3b), clearly contravenes the relevant planning policies on loss of land of valuable agricultural context.

Uncertainty regarding previous mining extraction on site or nearby

The application has been made in an area of known historical mineral extraction with numerous coal mining shafts and boreholes close to the proposed site⁶⁴. Both the applicant themselves and the Coal Authority accepts the potential for mining in the site boundary from the early medieval period through to the modern era⁶⁵.

Government Planning Policy Guidance notes the importance of considering previous mining areas and the “*potential effects of subsidence, including the potential hazard of old mine workings*”⁶⁶. The Emerging Local Plan also notes the importance of safety when proposing developments in areas with mining history⁶⁷.

Given the workings in or close by Bramley Moor Lane, this site should not be considered appropriate for large-scale industrial activity (comprising either exploratory drilling or full fracking) for the following reasons:

- The area was worked prior to the introduction of formal recording by government authorities – meaning a substantial number of pits, shafts and mines may be unrecorded;
- The applicant’s own survey notes evidence of coal extraction in the form of bell pits in very close proximity to the site with the potential for encroachment into the site itself⁶⁸;

⁵⁸ NEDDC “*Saved Policies*”, GS6

⁵⁹ NEDDC, “*North East Derbyshire Local Plan 2011 – 2033*”, SS1; Derbyshire County Council, “*Derby and Derbyshire Minerals Local Plan*”, MP1 & MP4

⁶⁰ Ineos, “*Planning Statement*”, 35

⁶¹ Ordnance Survey Map 1916, List of agricultural assets of the Sitwell family, c1910, Ordnance Survey Map c1840, Derbyshire Records Office and Eckington Library

⁶² Ineos, “*Environmental Report*”, 7-22

⁶³ Natural England map ALC005

⁶⁴ Ineos, “*Environmental Report*”, 8-5

⁶⁵ The Coal Authority Response to Planning Application: CM4/0517/10 : “*there is the potential for historic unrecorded coal mining features*” and Planning Statement, p.25: “*There is potential for low value remains of mining / coal extract within the site boundary from the early medieval period through to the modern era*”

⁶⁶ Minerals Planning Practice Guidance, para.148

⁶⁷ NEDDC, “*North East Derbyshire Local Plan 2011 – 2033*”, SS1: “*In order to contribute to sustainable development in North East Derbyshire, development proposals should: (I) Take account of any coal-mining related land stability and / or other public safety risks, and where necessary, incorporate suitable mitigation measures to address the risk*”

⁶⁸ Wessex Archaeology Detailed Gradiometer and Ground Penetrating Radar Survey Report, p.3

- Bramley Moor Colliery is located less than 200m from the boundary;
- The applicant's survey notes five anomalies in the survey area which demonstrated pit-like features, features associated with bell pits or potential back-filling (which can compromise the stability of underground and nearby soil), and;
- The applicant's own document is silent on the potential for underground workings, nor is it assessed by the reports that were commissioned.⁶⁹;
- The applicant does not satisfactorily assess a number of nearby points of interest; one mine entry, located within metres of the site has not been assessed through the gradiometer and GPR survey commissioned by the applicant⁷⁰, and a borehole⁷¹ adjacent to the proposed site is noted but no analysis has been undertaken either, and;
- The application contradicts itself on the presence of boreholes on the site; the Environmental Report states in one part that there are none in the "*immediate vicinity*" whilst a later paragraph in the same document states the converse. The applicant must remedy this contradiction, and take action as appropriate, before the mining risk can be judged to have been satisfactorily dealt with⁷².

Looking more widely at the potential impact of cumulative workings both at Bramley Moor Lane and within the North Derbyshire area, it is likely that any full hydraulic fracturing proposal would suffer from the same issues regarding residual risk left from historical mining extraction. The applicant does not provide sufficient detail or information on how this risk would be mitigated in the event of such large-scale activities and, therefore, policy SS1 is contravened again.

Light egress within a rural area

The applicant accepts that, if approved, the site would require "*permanent lighting*", that there will be some light pollution emitted from the site and that there will be some nearby residents not shielded from it⁷³.

As it stands today, lighting in the area is limited with moderately dark skies⁷⁴, in line with the rural character of the area. The applicant recognises that the numerous phases of the development would likely result in loss of tranquillity with "*fluorescent lighting visible beyond the localised site area*"⁷⁵ including local residential properties on Lightwood Lane and Ridge Road. The change in local character would be deemed high-medium⁷⁶.

Based on these assessments, the application already contravenes policy BE2 of the NEDDC Saved Policies which states that permission for external lighting will only be granted where they are "*sensitively designed, sited and installed to ensure that they do not have an adverse effect on the surrounding area*"⁷⁷. The Emerging Local Plan also talks about how development should be prevented if "*unacceptable levels*" of light pollution is created and is particularly focused on impacts on rural areas such as this site⁷⁸.

⁶⁹ NEDDC, "North East Derbyshire Local Plan 2011 – 2033, SS1: "Take account of any coal-mining related land stability and / or other public safety risks, and where necessary, incorporate suitable mitigation measures to address the risk"

⁷⁰ The Coal Authority, Mine Entry ref: 439378-026

⁷¹ SK37NE20 – Bramley Moor 1

⁷² Ineos, "Environmental Report", paras 7.3.3 and 7.3.5

⁷³ Ineos, "Planning Statement", 43: the "majority" of properties in the vicinity will be shielded by other phenomena against the light impacts. This means that a minority will not be.

⁷⁴ Ineos, "Environmental Report" 8-7

⁷⁵ Ineos, "Environmental Report", 5-12

⁷⁶ Ineos, "Environmental Report", 5-13

⁷⁷ NEDDC, "Saved Policies", BE2

⁷⁸ NEDDC, "North East Derbyshire Local Plan 2011 – 2033", SDC14

As well as being rejected on the absolute basis of light pollution in a rural area, the application should also be dismissed on the basis that the documentation provided does not sufficiently quantify the impact of that accepted pollution. The applicant has omitted specific detail of how far light from their proposal will travel at night and the potential repercussions of this. This renders the lighting assessment invalid as, beyond a broad recognition that light pollution will be emitted (something which is sufficient to contravene BE2 on its own), no accurate judgement can be made regarding the specific impact of the proposed lighting at a more granular level.

The lack of sufficient information is particularly concerning for bat populations. As already discussed, bat activity has been recorded in the area surrounding the proposed site. The applicant has failed to implement mitigation factors to reduce impact on local bat species and accepts, with regard to night lighting: *“The size/scale of the effect is considered to be high within the wider landscape setting”*⁷⁹

Despite this, the applicant has excluded specific location details of the nearby bats or a comprehensive assessment on the impact of the night lighting. Therefore, no conclusion can be made regarding the impact of the night life on the local bat population.

Further, looking at the application on a more cumulative basis, any extension of hydraulic fracturing into multiple sites across the area would naturally have a large impact on the landscape character of the area as a whole. Given that one site alone is, by the applicants own calculus, a *“high”* impact on the rural area nearby, a further thirty sites nearby would mean the creation of significant light pollution across North East Derbyshire.

Potential air pollution

By their own admission, the applicant’s proposal will negatively impact the quality of air in the area, with additional vehicle and equipment exhaust fumes, dust and the potential for the release of methane at various stages during the exploratory drilling phase⁸⁰.

The NEDDC Emerging Local Plan states clearly that proposals should avoid *“unacceptable”* levels of air quality whilst the Derbyshire Minerals Policy indicates that regard must be had for the effect on local communities and neighbouring land uses by reasons of *“dust”*⁸¹. Whilst the application offers some forms of mitigation to minimise the effect on the local environment, these mitigants do not adequately avoid a large increase in air pollution which otherwise would not occur if this application was rejected. It should be refused on this basis alone.

The acknowledgement of the potential release of methane is particularly concerning. Methane gas, which is toxic to humans, could be released as a result of the drilling process⁸².

Further, the documents provided by the applicant do not sufficiently quantify potential air pollution levels beyond a recognition that there would be some in a rural area:

- A recognition that localised emissions could include NOx, SOx, PM10 and 2.5, CO and VOCs⁸³ - but no assessment has been made on the potential impact on human health and air quality from these substances, and;

⁷⁹ Ineos, *“Environmental Report”*, 5-20

⁸⁰ Ineos, *“Planning Statement”*, 26

⁸¹ NEDDC, *“North East Derbyshire Local Plan 2011 – 2033”*, SDC14; Derbyshire County Council, *“Derby and Derbyshire Minerals Local Plan”*, MP1

⁸² Ineos, *“Environmental Report”*, 7-26

⁸³ Ineos, *“Environmental Report”*, 9-15

- No information is present within the document regarding the potential quantity of gas that could be released.

The potential release of an unknown quantity of toxic gases should be treated as an inappropriate effect on the local community.

In addition, consideration should also be given to the cumulative impact on air quality should further applications for drilling sites be approved in the area, as the applicant have suggested. The cumulative impact of vehicle emissions, dust and unexpected release of harmful gases would have a significant impact on a relative small area and would be thoroughly inappropriate for the rural nature of North East Derbyshire.

Other potential considerations not adequately dealt with by the application

Two further potential issues exist which the application does not adequately deal with:

- Local residents have highlighted the existence of an underground oil pipeline on or close by the site which has not been dealt with in the application. Conveyancing records from the 1960s confirm the existence of this pipeline to the east of Marsh Lane moving west. Development without assessing “*public safety risks*” such as historic pipelines in the area would contravene NEDDC Emerging Local Plan SS1⁸⁴, and;
- The North Derbyshire area is one which has been hit by low-level earthquakes in the past⁸⁵. The cumulative impact of the inconsistent and unreliable historic mining records on the proposed development site, combined with the nearby history of earthquake activity, suggest that there is potential for ground instability and subsidence on the site. This contravenes policy MP8 of the Derby and Derbyshire Minerals Local Plan, which sets out the need to mitigate impacts that could cause subsidence⁸⁶.

⁸⁴ NEDDC, “North East Derbyshire Local Plan 2011 – 2033, SS1: “In order to contribute to sustainable development in North East Derbyshire, development proposals should: (I) Take account of any coal-mining related land stability and / or other public safety risks, and where necessary, incorporate suitable mitigation measures to address the risk”

⁸⁵ 1.4 magnitude in Barlow (1991), 1.6 magnitude in Barlborough (1991), 1.5 magnitude in Mastin Moor (1991). See <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?>

⁸⁶ Derbyshire County Council, “Derby and Derbyshire Minerals Local Plan”, 25: “measures to avoid damage in the form of subsidence”

Appendix 1

INEOS SHALE - INVITATION TO TENDER

INEOS
Shale**Appointment of Seismic Survey Contractor Services on Behalf of INEOS Upstream**

INEOS Upstream Ltd has been formally offered 21 Petroleum Exploration and Development Licences in the recent onshore licence award announced by DECC in December 2015. This award, in addition to previously held licences, places INEOS as the leading acreage holder in the exploration and development of UK shale gas with over 1 million acres. As part of this award INEOS are looking to invest up to £640 million into the exploration of UK shale.

We are looking to appoint a Seismic Survey contractor to co-ordinate and shoot multiple 2D and 3D seismic surveys. Quote REF:A112;

The companies responding to this ITT need to be capable of simultaneously co-ordinating and delivering multiple large complex projects, supporting information, management and have experience in seismic surveys and regulation.

If you are interested in responding to this ITT please email shale.tender@ineos.com including the reference of the ITT, your company details and a nominated email contact before 5pm on 10th May 2016. The email address you provide must be capable of being used for the whole ITT process and be personal to a member of staff within your company. Please also include your company registration number within your initial email.

Please note that a vetting process will be undertaken by INEOS Upstream on receipt of any request for a copy of the ITT and those from any party not registered as a company within the field of expertise sought will not be responded to.



INEOS UPSTREAM

THE DRIVE BEHIND UK SHALE

INEOS
THE WORD FOR CHEMICALS

LICENCE WELL DENSITY EXAMPLE

The below example uses the horizontal well spacing example previously described and has been applied over a 100km² licence.

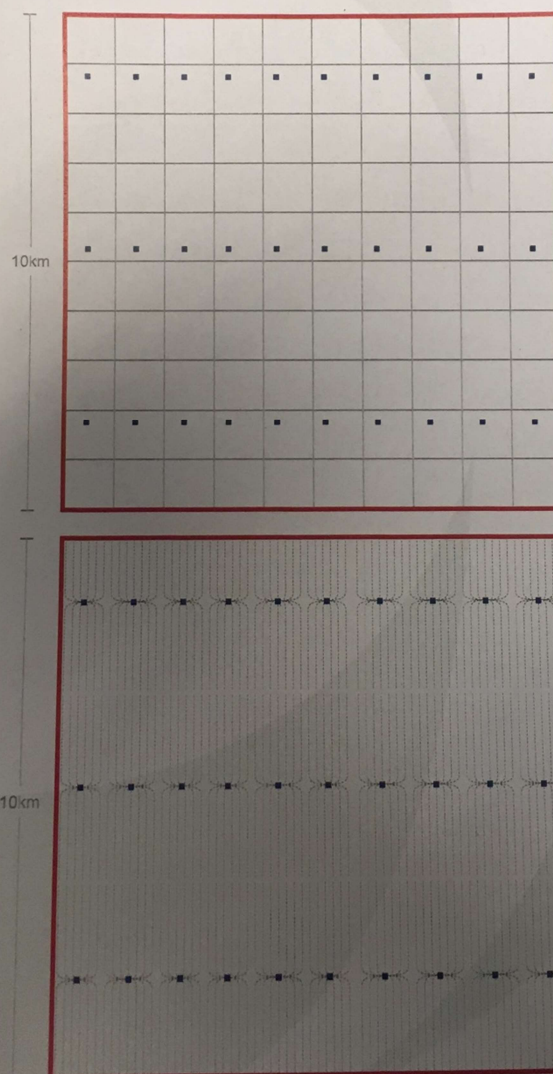
The example does not take into consideration the geology of the area, the topography of the land, designations, urban areas and reservoir development.

The process was undertaken to give the community an idea of the maximum numbers of well sites they can expect to see in a licence as well as the number of wells.

The example below shows up to 30 well sites within the licence and up to 396 horizontal wells. Land take in the area would total 30 hectares or 0.3km²

to access the full 100km². In reality surface and subsurface limitations will reduce these numbers.

It is worth noting when viewing the example that the well sites will not all appear at one time.



SURFACE WELL LOCATIONS FOR HORIZONTAL WELLS

30 Well Sites

0.01km² per site

0.3km² land take over licence

■ Well Site

SUBSURFACE WELL TRAJECTORIES

12-14 Wells per Site

Up to 396 Wells

■ Well Site

---- Well Trajectory