

# FAR FROM GOLD STANDARD

THE FLAWED REGULATORY SYSTEM  
FOR ONSHORE OIL AND GAS



A REPORT FOR KEITH TAYLOR GREEN MEP FOR SOUTH EAST ENGLAND







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## FOREWORD

**This report is about failings, weaknesses and breaches in regulation in the onshore oil and gas industry.** The Government is promoting the rapid expansion of onshore fossil fuel extraction, trumpeting the ‘gold standard regulation’ that will protect the environment, communities and shareholders. My research shows that this is far from the case. The industry is dominated by expansionist and aggressive companies, which frequently fall foul of the regulatory framework. The regulatory framework itself is not fit for purpose. Operations given planning permission before 2013 are not subject to permitting by the Environment Agency (EA) and therefore not under their scrutiny. There is too much reliance on self-regulation and an inability to monitor sites to standards required for public confidence. Local communities are taking on these tasks, which should rightly be done by the regulators.

Because of systemic failings in regulation this report asks if this industry can be effectively regulated, and if so, how? This fossil fuel extraction uses dirty and dangerous techniques to get at hard-to-reach resources. So is better regulation of such extreme onshore oil and gas exploration possible?

Fracking is taking off in the north of England where Cuadrilla has been granted final consent for the UK’s first horizontal shale gas well at its Preston New Road (PNR) site, despite years of opposition from local residents, councils and MPs. In my South East constituency, unconventional oil and gas extraction is being passed off as business as usual with plans afoot to turn Horse Hill in Surrey into the UK’s second largest onshore oil site.<sup>1</sup>

The latter is hugely controversial as there is no legal definition of ‘conventional’ and geologists have argued this type of drilling should be defined as ‘unconventional’ since much of the limestone in the region is unyielding and oil cannot flow easily without acid stimulation.

Across the country, unconventional drilling plans have caused outcry and public opposition by local people excluded from decisions that not only deeply affect their communities but the environment and the climate too.

The Government is actively encouraging onshore oil and gas, giving the green light to companies who want to pursue an expansionist programme to industrialise production across large areas of the UK. At the same time, funding to local authorities (including scaling-back of planning departments) and the regulators has been cut, leaving neither with sufficient time, resources or – since many of these activities involve new technology in the UK – expertise to enforce regulation or manage breaches.

The Government claims that the UK has gold standard regulations for exploratory activities, ‘to ensure on-site safety, prevent environmental contamination, mitigate seismic activity and minimise greenhouse gas emissions.’<sup>2</sup> Its consultation on permitted development for shale gas exploration said: ‘The UK has world class regulation to ensure that shale gas exploration can happen safely, respecting local communities and safeguarding the environment’.<sup>3</sup> The numerous breaches of planning, regulatory and environmental conditions across many different drill sites identified in this report, highlight that these regulations are not being followed.

Often these breaches are being observed and reported by concerned residents, though clearly it shouldn’t be down to local communities to monitor the drill sites on their doorsteps. This reality is leading to a whole range of negative consequences, including broken trust and confidence in the industry and decision makers, and concerns about police tactics, which appear to support

1 <https://drillordrop.com/2018/09/30/oil-firm-reveals-production-plans-for-500-tonnes-day-at-horse-hill/>

2 <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing/fracking/developing-shale-oil-and-gas-in-the-uk>

3 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/726916/Consultation\\_document\\_-\\_shale\\_gas\\_permitted\\_development.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/726916/Consultation_document_-_shale_gas_permitted_development.pdf)



the interests of the industry rather than the right to public protest.<sup>4</sup>

With only 13% of the British public supporting fracking,<sup>5</sup> drilling companies know they have no social licence to operate in the UK and, in an increasingly desperate move, are seeking draconian injunctions to bludgeon local people's right to peaceful and lawful protest. Meanwhile, the Government has proposed to class preliminary drilling as permitted development to fast track fracking. I vigorously oppose this outright attack on accountability and democracy in the planning system.

This report aims to shine a light on the far from gold standard regulation of this enormously controversial and environmentally risky industry. It will outline how breaches have occurred at sites around the country, where weak and failing regulation creates problems, and what should be done to address some of these issues. It has recommendations for the Government, industry and regulators about how to address weaknesses in the system.

Renewable energy has never been cheaper<sup>6</sup> while the cost of unconventional oil and gas extraction in environmental, social and carbon terms is unsustainable and unacceptable.<sup>7</sup> So I am calling on the Government to shift support from extreme oil and gas, and move rapidly to a renewable low carbon future.



**KEITH TAYLOR GREEN MEP FOR SOUTH EAST ENGLAND**

Member of the Environment, Public Health and Food Safety Committee  
European Chair of the Climate Parliament

4 <https://netpol.org/wp-content/uploads/2017/11/Protecting-The-Planet-Is-Not-a-Crime.pdf>

5 <https://www.gov.uk/government/statistics/beis-public-attitudes-tracker-wave-28>

6 <https://www.irena.org/publications/2018/Jan/Renewable-power-generation-costs-in-2017>

7 <http://www.ipcc.ch/report/sr15/>

# ONSHORE OIL AND GAS EXTRACTION IN THE UK

The Conservative government is promoting onshore oil and gas exploration and production, which it claims will contribute to the UK's energy security and ensure a low carbon and affordable future if the very highest safety and environmental standards are maintained.<sup>8</sup> The Department for Business, Energy and Industrial Strategy's (BEIS) written statement HCWS690 on Energy Policy, published on 17 May 2018, solidified the Government's support for the exploration and development of onshore shale gas resources, in line with its 2017 manifesto commitments.<sup>9</sup> It also announced plans to fast track fracking and use public funds to support its development, requiring the statement to be taken into consideration in planning decisions and plan-making in England. As a result, Minerals Planning Authorities (MPAs) are advised to plan positively for onshore gas and oil development.

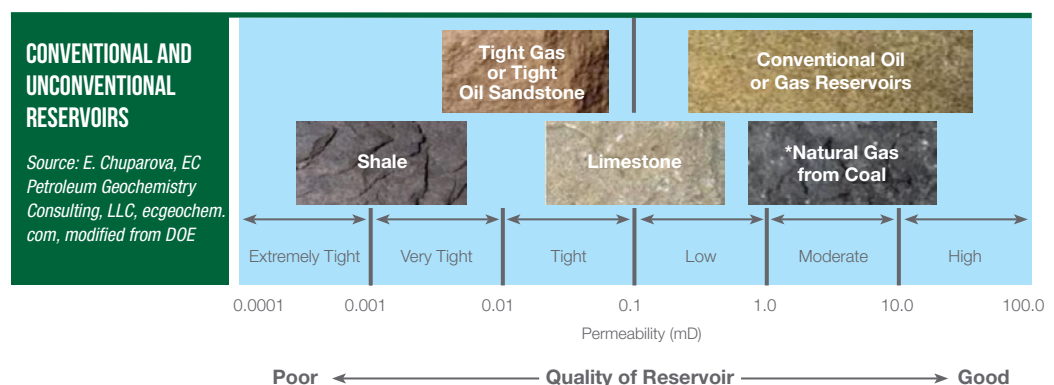
It is important to understand that there is a crucial difference between conventional and unconventional hydrocarbon extraction. However, the current definition of these differences in the English planning system is where the difficulties start.

## CONVENTIONAL AND UNCONVENTIONAL HYDROCARBONS

There is no legal definition of conventional hydrocarbon extraction. Conventional sources of hydrocarbons are defined in the Department for Communities and Local Government's (DCLG) 2014 National Minerals Planning Guidance<sup>10</sup> as any limestone or sandstone source rocks. This definition was inserted into the Guidance by the former Department of Energy and Climate Change (DECC), now BEIS, and is regarded as inappropriate by critics.<sup>11</sup> As traditionally understood by geologists as well as the oil and gas industry, the permeability – how easy or difficult it is to crack open the rock – should determine whether it is classified as conventional or unconventional.

'Conventional' source rocks have good permeability so that oil or gas can flow through them easily at commercial rate, allowing just one well to drain a large area. 'Unconventional' source rocks have poor permeability and will release the oil trapped within their 'pores' only if the rock is 'stimulated' at close quarters, through fracking or acidisation (both described below). Limestone and sandstone can, therefore, be 'conventional' or 'unconventional', but they often have poor permeability.<sup>12</sup> Unlike conventional techniques, extracting from 'tight' rocks of poor permeability will require a very large number of wells.

Instead of acknowledging these geological differences, the Guidance only recognises oil and gas from sources such as shale or coal seam reservoirs as unconventional hydrocarbons. The diagram shows there is a grey area when it comes to definitions.



8 [https://www.keithtaylor.mep.org.uk/sites/default/files/download/201808/community\\_engagement\\_UKOOG\\_BEISresponse5.3.18.pdf](https://www.keithtaylor.mep.org.uk/sites/default/files/download/201808/community_engagement_UKOOG_BEISresponse5.3.18.pdf)

9 <https://s3.eu-west-2.amazonaws.com/conservative-party-manifestos/Forward+Together+-+Our+Plan+for+a+Stronger+Britain+and+a+More+Prosperous....pdf>

10 <https://www.gov.uk/guidance/minerals#planning-for-hydrocarbon-extraction>

11 Kathryn McWhirter, Everything you always wanted to know about acidising, <http://www.frackfreesussex.co.uk/acidisingfull> Friends of the Earth briefing 'The Acid Test: the case for a ban on acid stimulation of oil and gas wells' [https://cdn.friendsoftheearth.uk/sites/default/files/downloads/acidising-briefing\\_2.pdf](https://cdn.friendsoftheearth.uk/sites/default/files/downloads/acidising-briefing_2.pdf)

12 <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/limestoneLandscapes/whatsLimestone/waterMovement.html>

## WELL STIMULATION TECHNIQUES

### Fracking

Fracking, short for 'hydraulic fracturing', is a well stimulation technique used to extract gas and oil trapped in shale rock formations deep underground. Water, chemicals and sand are pumped in at high pressure to fracture the rock, and the gas or oil flows back up the drill bore.

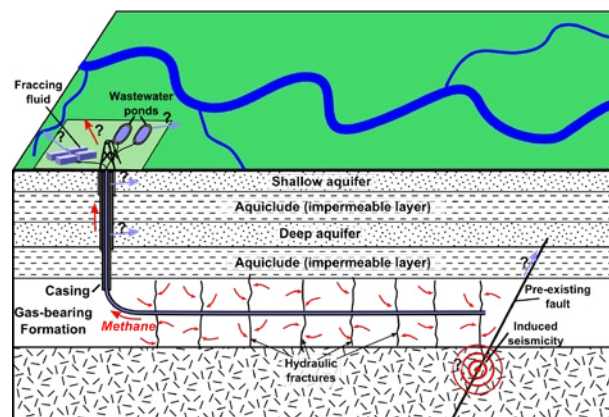
Despite having previously pledged an 'outright ban' on fracking in National Parks, in December 2015, MPs voted to allow fracking at 1,200m below National Parks, Areas of Outstanding National Beauty (AONB), the Norfolk and Suffolk Broads and World Heritage Sites.

Fracking is defined under the Infrastructure Act (IA) 2015 by the amount of fluid used, i.e. 'the injection of more than 1,000 cubic metres of fluid at each stage (or expected stage), or the injection of more than 10,000 cubic metres of fluid in total'.<sup>13</sup> Consequently, operators in England using less than the defined amount of water would not need to comply with legislation, regulation and planning guidance on fracking. This allows them to stimulate and drill the rock at shallower depths than the 1,000m minimum for fracking, as defined in the IA, as well as to drill from the surface of a National Park or AONB, without having to set up advance baseline monitoring of groundwater before drilling can start. In addition, Government requirements for compensation do not apply in these cases.

Under the current definition, 43% of gas wells and 89% of oil wells that have been fracked in the USA would not be recognised as fracking in England.<sup>14</sup> This issue could be solved by clearly defining fracking as an extraction process in which rock is cracked open by a pressurised chemical solution and recognising the different rock characteristics.

Due to the environmental and health risks associated with this drilling technique, hydraulic fracturing is highly controversial in many countries, including the UK. In the US, where shale gas exploitation is much more established than in the UK, there is a growing body of evidence on the harmful impacts of fracking. Risks include depletion of water resources, earthquakes, water and air pollution, contribution to climate change through the emission of greenhouse gases (GHG), industrialisation of tranquil areas, and negative health impacts for people and wildlife.<sup>15</sup>

According to BEIS's own research, awareness of fracking has remained between 70% and 80% over the last five years but only 13% of the British public support shale gas extraction.<sup>16</sup> Opposition has increased since the earthquakes in Lancashire in late 2018 were linked to fracking by Cuadrilla.



**SCHEMATIC DEPICTION OF HYDRAULIC FRACTURING FOR SHALE GAS SHOWING POTENTIAL SEISMIC EFFECTS**

Source: Mikenorton, HydroFrac.png, CC BY-SA 3.016

13 <http://www.legislation.gov.uk/ukpga/2015/7/section/50/enacted>

14 <https://www.theguardian.com/environment/2016/apr/13/uk-governments-fracking-definition-could-allowdrilling-without-safeguards>

15 <https://www.theguardian.com/us-news/2016/apr/07/wyoming-fracking-water-contamination-dangerouschemicals>

16 <https://www.gov.uk/government/statistics/beis-public-attitudes-tracker-wave-28>

## Acidisation

Fracking is not the only ‘unconventional’ way of extracting gas and oil. The planning application documents for the Balcombe oil drill in West Sussex, for example, described a process called ‘acid stimulation’: ‘Stimulation is carried out by pumping water under pressure into the natural fractures in the shale formations to open them up to allow the gas to flow more freely.’<sup>17</sup> As this sounds very similar to fracking, the confusion over terminology adds to the difficulty in understanding and responding to applications for permissions.

Like hydraulic fracturing in shale, acidisation is a ‘stimulation technique’ used to release oil and gas from unyielding rock such as limestone and sandstone. Acidisation involves injecting solutions of acids and other chemicals under pressure into the ground. The oil and gas industry divides acidising or acidisation into three ‘tiers’.

- **Acid wash** is a weak acid solution that cleans the wellbore at low pressure.
- **Matrix acidising** cleans and dissolves pathways through rock up to 1 metre from the wellbore at a pressure insufficient to fracture the rock.
- **Acid fracking** is done at high enough pressure to fracture the rock, creating longer pathways.

Acidising uses a higher concentration of chemicals than hydraulic fracturing. Fracking fluid for shale typically consists of water with 0.5% chemicals. Matrix acidising and acid fracking fluids can contain up to 18% chemicals. In limestone, the main acid used is hydrochloric, typically used in concentrations of up to 15%. In sandstone, it is hydrofluoric, a highly corrosive acid and a powerful contact poison, typically used at much lower concentrations of up to 3%. There could also be biocides, polymers to make the liquid gloopy, corrosion inhibitors, detergents, solvents and other potentially harmful chemicals. However, oil and gas firms routinely keep secret the exact chemicals and acids they plan to use.

In fact, the main difference is that they are simply used to extract different resources: the tendency is to acid frack for oil, whilst hydraulic fracturing is used for gas.

Acidisation shares many of the negative effects of hydraulic fracturing, especially considering its cumulative impact across various sites, including large volumes of toxic liquid waste; potential spills, leaking wells, water and air pollution; increasing waste and water usage for industrial operations; loss of tranquillity; landscape impacts and stress on communities; and a huge increase in heavy goods traffic.

There are potentially large shale fossil fuel resources in the South East. The Weald Basin, running from Kent through Sussex and Surrey to Hampshire and the Isle of Wight, is seen as a prime area for shale oil. Parts of Oxfordshire and Buckinghamshire are also being eyed up as potential drilling sites. Planning permission has been issued for drilling at sites in Surrey and West Sussex.<sup>18</sup> New applications are currently being made or assessed, and more will likely follow.

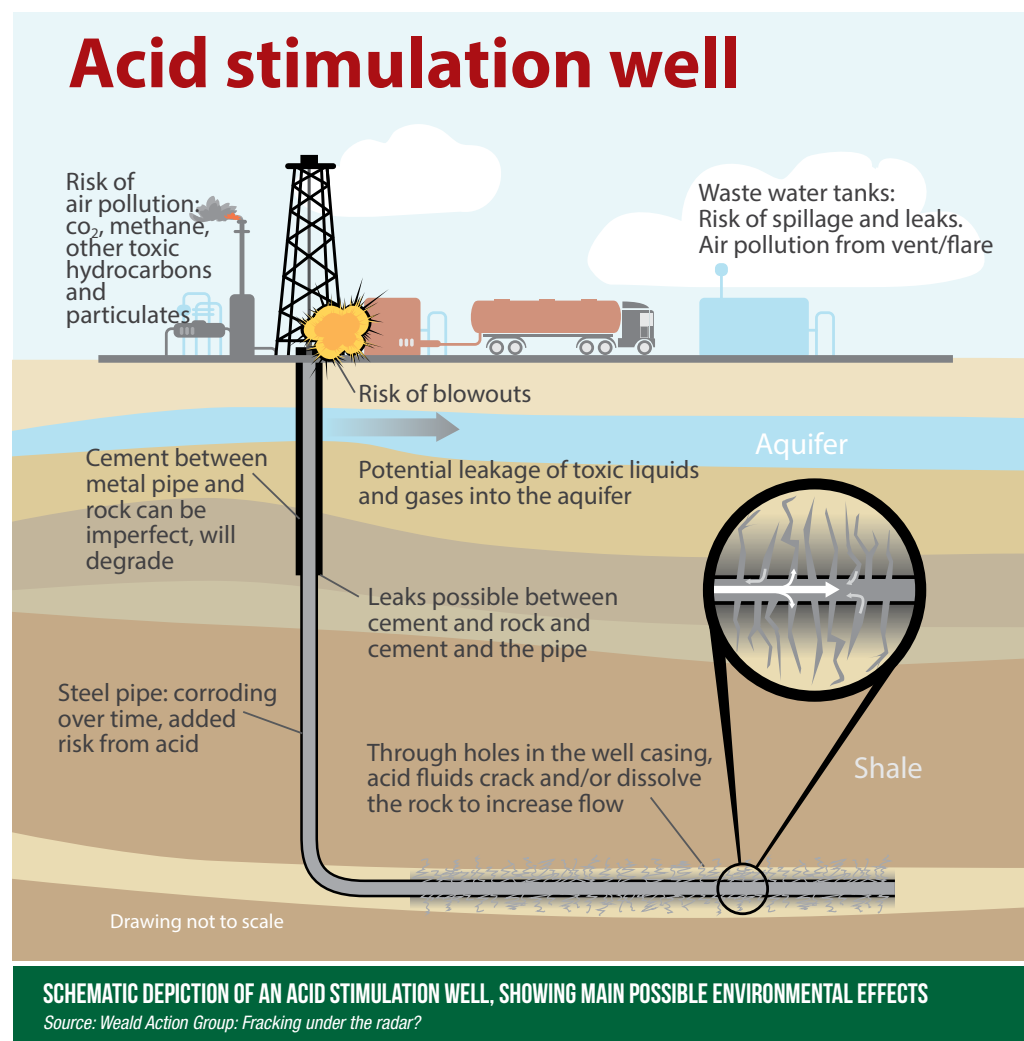
Due to a lack of clarity around what constitutes unconventional drilling, the acid stimulation techniques being used or proposed in the South East are not subject to the same level of regulation afforded to fracking operations. In the 14th round of Petroleum Exploration and Development Licence (PEDL) allocation,<sup>19</sup> all licensed areas in the Weald were declared to be ‘conventional’ despite much of the region’s limestone proving to be unyielding without the aid of acidisation. The geology of the region also clearly includes unconventional shale resources. Critics have argued that the term ‘conventional’ has been misapplied to avoid scrutiny from

17 <https://gasdrillinginbalcombe.files.wordpress.com/2011/12/8-appendix-c-the-drilling-operation.pdf>

18 <https://www.keithtaylormep.org.uk/publication/updated-guide-drilling-acidisation-and-fracking-south-east0>

19 <https://www.ogauthority.co.uk/licensing-consents/licensing-rounds/onshore-licensing-rounds>  
<https://drillordrop.com/everythingyou-always-wanted-to-know-aboutacidising-detailed-study-bykathrynmcwhirter/>

council planners, industry regulators, media and the public.<sup>20</sup> This has led to concerns that current and potential impacts are growing without proper monitoring and assessment as required by the Strategic Environmental Assessment (SEA) of the 14th Onshore Licensing round.<sup>21</sup>



### DEFINING UNCONVENTIONAL ONSHORE OIL AND GAS

This report explores the regulation of and plans for the UK's unconventional onshore oil and gas resources. For geologists, 'conventional' fossil fuel extraction means without 'stimulation'. Therefore, in the absence of a clear legal definition, and due to the concerns outlined above, this report regards both acidisation and hydraulic fracturing as 'unconventional' extraction techniques.

#### Further information:

Texas Earthworks – Hydraulic Fracturing: [https://earthworks.org/issues/hydraulic\\_fracturing\\_101/](https://earthworks.org/issues/hydraulic_fracturing_101/)

Canadian Society for Unconventional Resources: <https://www.csur.com/>

Environment Agency – FAQ: [https://consult.environment-agency.gov.uk/onshore-oil-and-gas/onshore-oil-and-gas-regulation-information-page/supporting\\_documents/Acidisation%20FAQs%20January%202018.pdf](https://consult.environment-agency.gov.uk/onshore-oil-and-gas/onshore-oil-and-gas-regulation-information-page/supporting_documents/Acidisation%20FAQs%20January%202018.pdf)

A new resource for reporting and monitoring breaches has recently been set up by Frack Off: <https://frack-off.org.uk/incidents/>

20 <http://www.frackfreesussex.co.uk/wealdactiongroup>

21 <https://www.gov.uk/government/consultations/environmental-report-for-further-onshore-oil-and-gas-licensing>





**Keith Taylor waits in vain for a meeting with Simon Hodgson of the Forest Enterprise.**

## THE UK'S REGULATORY FRAMEWORK FOR ONSHORE OIL AND GAS

**The Government claims that with over 50 years experience in regulating UK onshore oil and gas, it has an established regulatory regime for exploratory activities.** Whenever critics voice concerns about environmental and health impacts of unconventional onshore oil and gas extraction, these 'gold standard regulations' are quoted as a guarantee that sites will be kept safe, environmental contamination prevented, seismic activity mitigated and GHG emissions minimised.<sup>22</sup>

The onshore oil and gas industry in England is regulated by a network, consisting of BEIS, EA, the Oil and Gas Authority (OGA), the Health and Safety Executive (HSE), Public Health England (PHE), and local council planning authorities, including MPAs. The OGA is the final decision maker, signing off operations once all the permits are in place.

### THE OIL AND GAS AUTHORITY – OGA

The OGA regulates, influences and promotes the oil and gas industry in the UK. It was created as an executive agency of BEIS, formerly DECC, in 2015 and became a Government company the following year, with the Business Secretary, currently Greg Clark MP as its sole shareholder.<sup>23</sup> One of its main roles is to manage the onshore and offshore oil and gas licensing system in Great Britain on the Government's behalf. The OGA's responsibility also includes managing the risk of induced seismicity.

Any operator wishing to explore for onshore oil and gas in England first needs to obtain a PEDL from the OGA (different regimes apply in other parts of the UK). Onshore petroleum licences are issued in rounds. Licences were last awarded in December 2015, part of the 14th round, during which 159 onshore blocks, incorporated into 93 licences were granted. There were no licences awarded in Scotland, where a moratorium against fracking was imposed by the Scottish government in January 2015 and upheld by MSPs in October 2017.<sup>24</sup> Rights to occupy land for exploration or production, however, also need to be sought from the respective landowners of a site.

The OGA requires an operator to drill at least one well during the initial exploration phase to keep its licence. A PEDL's initial term is 5-6 years and is considered ample time to get started if there are workable plans. If the operator drills an exploratory well, it can move onto the appraisal and production phases. In reality, however, this rule is being continually flouted and licences extended where no drilling has taken place. In the 14th round of onshore licensing it is likely that all licences will have their initial terms extended.<sup>25</sup>

### THE HEALTH AND SAFETY EXECUTIVE – HSE

One of the main roles of HSE is to monitor well integrity during oil and gas operations. As part of this, it inspects the design, construction and upkeep of well design as a way to manage health and safety risks.<sup>26</sup> However, the HSE makes it clear that it is the duty of the operators themselves to ensure they comply with their legal requirements and to identify, manage and report any risks connected to their activities.<sup>27</sup> The HSE aims to work closely with the EA as well as the other regulators and has guidance about this in relation to shale gas (although it should apply to all onshore oil and gas operations).<sup>28</sup> The regulatory road map sets out how the regulators work together before work can start.

22 <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk>

23 <https://www.ogauthority.co.uk/about-us/what-we-do/>

24 <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-41722485>

25 <https://drillordrop.com/2019/02/09/weekend-long-read-promises-promises-will-operators-meet-their-drilling-commitments-and-does-it-matter/>

26 <http://www.hse.gov.uk/aboutus>

27 <http://www.keithtaylormp.org.uk/sites/default/files/download/2019-02/20190218161253833.pdf>

28 <http://www.hse.gov.uk/offshore/shale-gas-planners.pdf>

The ongoing regulation is where problems have arisen – these are set out in the case studies – and is concerned with joined up regulation in relation to old wells and ‘emergency’ operations.

## **PUBLIC HEALTH ENGLAND – PHE**

PHE is an executive agency of the Department of Health and Social Care. Its mission is ‘to protect and improve the nation’s health and to address inequalities through working with national and local government, the NHS, industry and the voluntary and community sector’.<sup>29</sup> PHE seeks to understand and evaluate current scientific evidence and publish reports on potential public health risks, including shale gas. Working with the different regulators, PHE ensures that potential health impacts of operations are properly assessed as part of the planning and permitting process.

In 2014, PHE published a report that concluded the potential risks to public health from exposure to the emissions associated with shale gas extraction would be low if the operations are properly run and regulated. The report focused on direct emissions of chemicals and radioactive pollutants.<sup>30</sup>

Both the original report<sup>31</sup> and the review that followed after consultation were widely criticised for their limited scope and failure to take into consideration a wealth of peer reviewed publications emerging after 2012. Critics also lamented its failure to assess the sustainable use of water resources, GHG emissions and the impact of noise and odour. It also did not consider visual impact, occupational health, or traffic impacts linked to drilling activities, other than those linked to vehicle exhaust.<sup>32</sup> Health experts and campaigners alike have been calling for an update of the review, especially in light of a 2015 report by the Government’s Air Quality Expert Group (AQEG), which concludes that shale gas extraction increases air pollution. This report had been kept secret until July 2018, just after Business Secretary Greg Clark approved fracking in Lancashire. Most recently Drs Kneale and Rugman published a damning letter citing medical evidence of the health impacts of fracking and called it ‘a negligent failure’ by PHE not to update its 2014 report.<sup>33</sup>

While the report assessed the potential health impact from single wells for small-scale exploratory drilling as ‘likely to be very small’, it conceded that the cumulative impacts of many wells in various phases of development in relatively small areas were potentially greater and would need careful scrutiny during the planning process.

## **LOCAL AUTHORITIES**

Oil and gas exploration and development falls into the mineral and waste planning regime. This is carried out by county councils, National Park Authorities and unitary authorities. These bodies produce minerals and waste plans, make decisions about minerals and waste applications and monitor and enforce developments once they are approved. Their role includes safeguarding, which means that sites potentially suitable for minerals extraction are kept free from other kinds of development which might stop minerals extraction going ahead.<sup>34</sup>

The MPA must consult district and parish councils about planning applications. These councils differ in how they treat this role with some being proactive and consulting local residents, and others delegating this task to officers without asking local residents what they think.

Local councils need to factor other relevant policies into their decision making, like national or local policies on climate change. Fossil fuel proposals are increasingly coming into conflict with legally binding Government commitments and local policies to cut carbon emissions. Some

29 <https://www.gov.uk/government/organisations/public-health-england>

30 Public Health England report, 2014 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/332837/PHE-CRCE-009\\_3-7-14.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/332837/PHE-CRCE-009_3-7-14.pdf)

31 <https://theecologist.org/2014/may/06/shale-gas-and-public-health-whitewash-exposed>

32 <https://drillordrop.com/2017/08/24/4000-call-for-updated-uk-report-on-fracking-health-impacts-as-study-finds-17-6m-americans-live-within-1-mile-of-oil-and-gas-sites/>

33 <http://investigatingbalcombeandcuadrilla.files.wordpress.com/2019/02/190204-public-health-england-open-letter.pdf>

34 <https://www.gov.uk/guidance/minerals#minerals-safeguarding>



local councils have attempted to ban fracking and introduce buffer zones. For example North Yorkshire County Council, the North York Moors National Park and City of York have argued in their Joint Minerals and Waste Plan that there should be a local definition of fracking and a 500m buffer zone between fracking sites and homes.<sup>35</sup> This has been resisted by the industry and a decision is awaited.

Local councils acting as the minerals and waste authority carry the heaviest burden of oil and gas site-based decision making as they are asked to permit the infrastructure and operations. This might be before or after the EA approves a permit – the order of decision making lacks clarity. Local authorities are under increasing pressure to scrutinise all aspects of operations, so as not to pass the buck to other regulators whose role kicks in subsequently. By then it is often too late to change the substance of a proposal.

There is a lack of expertise amongst the minerals planning staff about these kinds of applications – largely because these are new technologies. There is an overreliance on the operators to provide information and some local communities, including at Leith Hill and Markwells Wood, have resorted to paying for their own expert reports and submitting them to the planning authorities. Citizens should not be bearing the costs for this; local authorities should be able to commission their own expert advice and the cost passed onto the operators, if they are not providing the necessary information.

The Planning Inspectorate can be brought into decision making – for example if there is an appeal against a local authority decision (see Leith Hill case study). They also take on projects which fall into the Nationally Significant Infrastructure Projects regime. If Government proposals to fast track fracking by bringing them into this regime go ahead, the role of local authorities in the planning process would change dramatically. They would be bypassed with decisions being made by the Planning Inspectorate and the BEIS Secretary of State instead. Greg Clark, the incumbent at the time of writing, proposed fast tracking fracking in the first place to facilitate the exploration and development of onshore shale gas resources in line with his party's manifesto commitments. This raises concerns about the independence of the process.

## THE ENVIRONMENT AGENCY – EA

The EA is England's environmental regulator for onshore oil and gas operations. Its stated aim is to ensure that oil and gas operations are carried out in a way that protects people and the environment. Local teams around the country advise on permit applications, regulate operational sites and inspect and enforce the permits so that risks are managed.

The other devolved nations have their own environmental regulators. Natural Resources is responsible for Wales, alongside the Scottish Environment Protection Agency (SEPA) and the Northern Ireland Environment Agency (NIEA).

Because of Government funding cuts the EA has shed 2,500 full time jobs since 2013 (20% of its work force). In 2017 there were 5000 fewer monitoring visits to sites with permits than in 2014. There were also fewer audits, checks of monitoring equipment and data submissions. These are all methods used to monitor sites with EA permits like oil and gas sites.<sup>36</sup>

## DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY – BEIS

BEIS is responsible for administering the UK's hydrocarbon resources on behalf of the Crown, which holds ownership rights under the Petroleum Act (1998). Certain administrative functions are passed to the OGA, as outlined above. Once all the relevant permits have been granted

35 [https://www.northyorks.gov.uk/sites/default/files/fileroot/About%20the%20council/Partnerships/Publication\\_main\\_plan\\_document\\_%28Nov\\_2016%29.pdf](https://www.northyorks.gov.uk/sites/default/files/fileroot/About%20the%20council/Partnerships/Publication_main_plan_document_%28Nov_2016%29.pdf)

36 <https://unearthed.greenpeace.org/2018/12/08/environment-agency-pollution-inspections-cuts-rivers/>

**Oil rig at Brockham, Surrey, where a horizontal sidetrack was drilled without planning permission.**

by the different regulators, a fracking company has to apply for BEIS to issue a hydraulic fracturing consent (HFC) licence for their site. The Secretary of State (the same Minister as the one promoting fracking) therefore ultimately reviews and consequently approves or rejects all fracking applications. However, this procedure does not apply to applications that involve acidisation. They go through the normal minerals planning regime.



## UK ONSHORE OIL AND GAS – UKOOG

This industry body has been tasked by the Government with developing and policing a charter for community engagement for fracking sites.<sup>37</sup> UKOOG is an outspoken promoter of the oil and gas industry and appears at public inquiries on its behalf. Yet it is secretive when it comes to its membership, or what sanctions it has taken against any company failing to apply the protocol. It would appear that the charter only applies to the small number of sites technically designated as ‘fracking’ sites.

The commitment: ‘to confirm and publish evidence each year of adherence to this charter’ is not forthcoming. There is no better test of a voluntary good practice agreement than evidence that those who break it face sanctions. But no such information is available. The Secretary of State and other ministerial colleagues also cannot answer.<sup>38</sup> The most recent online report is for 2017 and its focus on the topic of community engagement is on compensation payments made to local communities near fracking sites (£100,000 per well). It is silent on reporting on how, as the Charter<sup>39</sup> demands, local communities have been consulted in advance of any planning permission.

UKOOG operates without transparency or accountability when it comes to promoting good relations with local communities. The Government, in its voluntary approach to regulation, is relying on this industry body to look after the interests of local residents when promoting fracking operations. Time and again communities report<sup>40</sup> failings in consultation – mainly being ‘told’ about plans when it’s too late to challenge them; community liaison groups which don’t work effectively and companies not listening to complaints when things go wrong.

The regulatory framework for onshore oil and gas is not fit for purpose – it is structurally weak and conflicted and the definitions and practice are not keeping up with industry developments, like the use of acidisation.

37 <http://www.ukoog.org.uk/community/charter>

38 Keith Taylor correspondence with the Secretary of State Greg Clark MP and Minister Claire Perry MP on this issue. Claire Perry’s reply pointed to UKOOG’s 2016 annual report.

[https://www.keithtaylormep.org.uk/sites/default/files/download/2018-08/UKOOG\\_Greg\\_Clark\\_15.02.2018.pdf](https://www.keithtaylormep.org.uk/sites/default/files/download/2018-08/UKOOG_Greg_Clark_15.02.2018.pdf)  
[www.keithtaylormep.org.uk/sites/default/files/download/2018-08/onshore\\_oil\\_and\\_gas\\_Claire\\_Perry\\_26.04.18\\_1.pdf](http://www.keithtaylormep.org.uk/sites/default/files/download/2018-08/onshore_oil_and_gas_Claire_Perry_26.04.18_1.pdf)

39 <http://www.ukoog.org.uk/community/charter>

40 <https://www.keithtaylormep.org.uk/sites/default/files/download/2018-09/371841366-How-have-oil-and-gas-firms-in-the-South-East-engaged-with-affected-communities.pdf>



## CASE STUDIES

These case studies assess breaches and failings in regulation at various sites in England, both fracking and non-fracking. This is a selective look, and not intended to be comprehensive.

SITE	BREACHES/FAILINGS	AGENCIES INVOLVED
<b>Bury Hill Wood, Leith Hill, Dorking, Surrey</b> <b>Operator: Europa Oil and Gas</b> <b>Licence Number: PEDL 143</b>	Community consultation Unworkable plan Licence extension	EA OGA Planning Authority Planning Inspectorate
<b>Feltons Farm, Old School Lane, Brockham, Surrey</b> <b>Operator: Angus Energy</b> <b>Licence Number: PEDL 235</b>	Drilling without planning permission Failure of regulators to work jointly Old EA permit Conflicting information by operator Overreliance on self-regulation Unreliable operator	EA HSE OGA Planning Authority
<b>Markwells Wood, West Sussex, Hampshire</b> <b>Operator: UKOG</b> <b>Licence Number: PEDL 126</b>	Old permit Breach of planning condition Overreliance on self-regulation Delays in decommissioning and restoration Conflicting information by operator	EA OGA HSE Planning Authority
<b>Horse Hill, Surrey</b> <b>Operator: Horse Hill Developments (HHDL)</b> (part of the UKOG group of companies) <b>Licence Number: PEDL 137 and 245</b>	Temporary to permanent permissions Earthquake risk not addressed	OGA Planning Authority
<b>Lidsey, West Sussex</b> <b>Operator: Angus Energy</b> <b>Licence Number: PEDL 241</b>	Breach of planning condition and Section 106 agreement (for deliveries)	Planning Authority
<b>Broadford Bridge, West Sussex</b> <b>Operator: UKOG</b> <b>Licence Number: PEDL 234</b>	Alleged breach of planning condition Failure to consult local residents Inability of council to monitor sites	Planning Authority
<b>Kirby Misperton, North Yorkshire</b> <b>Operator: Third Energy</b> <b>Licence Number: PEDL 80</b>	Breach of environmental permit Financial uncertainty	EA OGA

SITE	BREACHES/FAILINGS	AGENCIES INVOLVED
<b>PNR, Lancashire</b> <b>Operator: Cuadrilla</b> <b>Licence Number: PEDL 165</b>	Breach of environmental permit Breach of planning condition Lack of adequate emergency procedures Potential weakening of regulation on earthquake traffic light system Lack of information provided by operator	EA Lancashire County Council (as head of the Local Resilience Forum) OGA Planning Authority
<b>West Newton, East Yorkshire</b> <b>Operator: Rathlin Energy</b> <b>Licence Number: PEDL 183</b>	Environmental permit breach Overreliance on self-regulation Lack of coordination by regulators Lack of engagement with local community Failing to provide information Traffic Management Plan (TMP) breach	EA HSE Planning Authority

**SITE: BURY HILL WOOD, LEITH HILL, DORKING, SURREY**  
**OPERATOR: EUROPA OIL AND GAS LICENCE NUMBER: PEDL 143**

**Failings:**

- **Failure to consult local communities**
- **Unworkable plan approved by Planning Inspector**
- **Extension of licence without any drilling taking place**

Europa Oil and Gas first came forward with plans to drill an exploratory well in the Surrey Hills AONB in 2008. It had acquired the licence (PEDL 143) in 2004. The plans for a site in Coldharbour Lane, south of Dorking, would have impacted the AONB, the Green Belt, an historic sunken lane, and the fragile woodland ecology and tranquil setting, and were met with resolute opposition by local villagers in Coldharbour, who established the Leith Hill Action Group in March 2009, and set out to oppose the drilling proposals through the planning system and the courts as necessary.

Surrey County Council's planning committee turned down the application in 2011, due to the plans' 'significant adverse impact on the AONB in the setting of Leith Hill which cannot be mitigated', as well as inadequate traffic management measures.<sup>41</sup> When Europa appealed, a Public Inquiry was held but the appeal was unsuccessful. Europa then took the case to the High Court and succeeded in securing another Public Inquiry in 2015, at which a Planning Inspector granted Europa permission if the company met 23 conditions, including putting a workable TMP in place. At this point another local group, A Voice for Leith Hill, was formed with the aim of raising public awareness across a wider area about these highly controversial plans.

<sup>41</sup> [https://www.surreycommunity.info/lhag/files/view/Grounds\\_of\\_refusal.pdf](https://www.surreycommunity.info/lhag/files/view/Grounds_of_refusal.pdf)



## Keith Taylor joins protesters at Leith Hill in Surrey.



By the time the original permission ran out in August 2018, Europa still had no workable TMP, despite coming up with 14 different proposals since first lodging their application. The company then applied for an extension which sought to loosen the specification of the TMP by trying to remove the requirement for the overall scheme to include an identified HGV holding area, lending weight to critics' claims that it is not usual for drilling companies struggling to fulfil their planning conditions to simply try and change the rules.

At the same time, the Forestry Commission lease, which allowed Europa to use the site they had identified for drilling, was due to expire. The Leith Hill Action Group, A Voice for Leith Hill and Keith Taylor MEP had all appealed to the Forestry Commission and the Environment Secretary to deny a renewal of the lease.<sup>42</sup> In September 2018, the Environment Secretary, Michael Gove, decided against renewing the lease, citing concerns over the impact the plans would have on ancient woodland. As a result, Europa withdrew its plan.

The Leith Hill project was founded on a false premise – that this was an acceptable location. It was approved by a Planning Inspector against the advice of the relevant local authorities and the local community and had an unworkable TMP. This was identified at a very early stage but ignored by the drilling company and the planning process. The cost to the company and the community ran into millions and over a hundred thousand pounds respectively. This failed everyone involved, but at least Leith Hill was saved from a very damaging proposal.

### Repeated extension of OGA licence

Europa failed in its commitment to drill an exploratory well and no permission has been granted despite its efforts for over a decade. Nevertheless, the original licence PEDL 143 was extended several times, most recently in the summer of 2018, despite all the site's problems being abundantly clear to the OGA when they permitted the latest two-year extension. The licence is now due to expire in September 2020.

Although Europa has withdrawn its most recent planning application following Michael Gove's decision not to extend the Forestry Commission licence, the operator says it will keep looking for a suitable site to exploit the resource. The latest drilling licence renewal makes this possible despite the recent events all but confirming that the sensitive area is not suitable for oil exploration, creating further uncertainty for the local community.

The Leith Hill drill site is a prime example of the OGA extending licences against their own rules, but it is not the only one. A study by DrillorDrop in July 2018 found that 12 drilling licences had been extended without any drilling taking place after ten years.<sup>43</sup> Challenging the OGA on these decisions, including pointing out the unsuitability of certain PEDLs in the first place, is incredibly difficult since the single licence shareholder is the Secretary of State for Energy – the very person who is promoting onshore oil and gas in the UK.

42 <https://www.scribd.com/document/382259991/Keith-Taylor-MEP-writes-to-the-Forestry-Commission-over-oil-and-gas-drilling-concerns>

43 <https://drillordrop.com/2018/04/07/weekend-long-read-pedl-power-what-you-need-to-know-about-oil-and-gas-licensing-in-2018/>

**SITE: FELTONS FARM, OLD SCHOOL LANE, BROCKHAM, SURREY**  
**OPERATOR: ANGUS ENERGY LICENCE NUMBER: PEDL 235**

**Failings:**

- **Planning permission breach against advice**
- **Failure of regulators to work jointly when planning breach occurred**
- **Operating under old EA permit**
- **Conflicting information given to regulators and shareholders**

**Lack of planning permission**

Angus caused controversy at the site in 2016/2017 by drilling a sidetrack well without permission from Surrey County Council (SCC). The suspected breach was spotted by members of the Brockham Protection Camp and local residents and reported to the Council between December 2016 and January 2017. It is clear that the work was not carried out in error as Angus was advised by a planning consultant as early as 2014 that it would need planning permission to drill a sidetrack,<sup>44</sup> and told by SCC in September and December 2016 that it did not have the permission in place.<sup>45</sup> This information was obtained through Freedom of Information (FOI) requests submitted by members of Brockham Oil Watch – a group of local residents.

Before it started the sidetrack drilling Angus launched onto the AIM stock market in November 2016, misinforming shareholders about the planning permission situation in its admission document to AIM.<sup>46</sup> Then the company vehemently denied it had drilled without authorisation, stating on its website ‘The QC confirms that the sidetrack to Well BR-X4, drilled in January 2017, is authorised by this 2006 planning permission’.<sup>47</sup>

The following year, however, the operator applied for retrospective permission for the sidetrack, which Councillors granted during the SCC Planning and Regulatory committee sitting in August 2018. Even though the retrospective element of the application proves that planning consent for the sidetrack was needed, the company still refuses to admit this publicly. Campaigners are extremely concerned that Angus will start commercial production under this permission, which is what the firm has consistently told its investors.<sup>48</sup>

At the meeting, Committee Chair Councillor Tim Hall, called Angus ‘the least reliable hydrocarbon applicant we have dealt with.’ He further told the company, ‘The fracas over this application at the start and the less than clear and open position you took with us does not fill myself or the Vice-chairman with any great cheer [...] you have not historically been consistent and taken the right professional advice and done the right professional things.’<sup>49</sup> Councillors granted Angus permission for a three-year appraisal period as well as the retrospective permission they sought.

As other regulatory bodies approved activities at the site when there was no planning permission in place, there are also serious concerns about a lack of joined-up regulation between councils (in this case SCC), the EA, the HSE and the OGA.

The legacy of the planning dispute concerning the Brockham site highlights the serious flaws of the current regulatory regime and the need for vigilance from the regulators specifically in the case of difficult to monitor activities like oil and gas exploration. Had it not been for a group of residents and a protection camp monitoring and reporting about activities on site, this serious breach might never have come to light.

44 Private Eye No. 1466, 23 March – 5 April 2018, <https://brockhamoilwell.files.wordpress.com/2018/04/keeping-the-lights-on.pdf>

45 [https://www.whatdotheyknow.com/request/390017/response/952500/attach/4/Letter%20Feltons%20Farm%20Dec%202016.pdf?cookie\\_passsthrough=1](https://www.whatdotheyknow.com/request/390017/response/952500/attach/4/Letter%20Feltons%20Farm%20Dec%202016.pdf?cookie_passsthrough=1)

46 <http://www.angusenergy.cfo.uk/wp-content/uploads/2016/11/Angus-Energy-AIM-Admission-Document-7.11.2016.pdf>

47 <http://www.angusenergy.co.uk/what-we-do/brockham-oil-field-faqs/>

48 <http://www.angusenergy.co.uk/what6we-do/brockham-oil-field-faqs/>

49 [https://surreycc.public-i.tv/core/portal/webcast\\_interactive/367258/start\\_time/157000](https://surreycc.public-i.tv/core/portal/webcast_interactive/367258/start_time/157000)



## Outdated environmental permit

In June 2018, Brockham Oil Watch uncovered in an exchange with the EA that the site is licensed under an old-style environmental permit. This enabled the operator to carry out well stimulation and fluid reinjection without the requirement to collect and maintain data, including information on the concentration and amount of acid used in their wells.

The investigative journalism website DrillorDrop reported that the EA had been updating permits for existing oil and gas sites on an ongoing basis since 2013 and that 38 outdated permits were still in use.<sup>50</sup> A new permit was granted at the end of 2018 for the Brockham site. It excludes acidisation and water reinjection pending more information being received. However the commercial extraction of oil at this site would most likely require acidisation to stimulate the flow of oil from the Kimmeridge layer.<sup>51</sup>

**SITE: MARKWELLS WOOD, WEST SUSSEX, HAMPSHIRE OPERATOR: UKOG  
LICENCE NUMBER: PEDL 126**

### Failings:

- **Weak regulation under pre-2013 permits**
- **Breach of planning condition**
- **Overreliance on self-regulation by the operator**
- **Delays in decommissioning and restoration**
- **Misleading information given to shareholders**
- **Licence moved from initial term in breach of rules**

A temporary hydrocarbon licence was granted to Northern Petroleum for the Markwells Wood site in West Sussex in 2009. Well testing took place in 2011. UKOG acquired part of the interest in the site in 2014 as part of its purchase of Northern Petroleum's UK interests and took up a 100% interest in 2015 from Magellan. A planning permission for exploration was in place at the time ending in 2015 and UKOG applied for a further 18 months permission for continued operations, restoration and plugging the well and abandonment of the site. This was granted by the South Downs National Park Authority in 2016. UKOG then applied for permission to drill a sidetrack from the existing well, four new wells and to allow production for 20 years.

**Markwells Wood in the South Downs National Park – dead in the water even while expansion promised.**

*Source: Markwells Wood Watch*



<sup>50</sup> <https://drillordrop.com/2018/06/14/residents-uncover-regulatory-loophole-at-surrey-oil-site/>

<sup>51</sup> <https://cdn.friendsoftheearth.uk/sites/default/files/downloads/acidising-briefing.pdf>

Markwells Wood Watch (MWW) and others objected to the application and in 2017 the EA and Portsmouth Water made significant objections, stating the planning application showed an inadequate understanding of the local hydrology and its risks to the aquifer. UKOG then withdrew the application.

The planning breach occurred when UKOG tried to string out the site restoration which should have happened when its planning permission ran out in September 2016. They applied for a new planning permission but withdrew it in May 2017. Even then they claimed they were in consultation on a further application, but MWW established that during this time the company had no contact with the South Downs National Park Authority, the EA or Portsmouth Water. In July 2018, planners in the South Downs National Park issued a second order to UKOG to restore its site at Markwells Wood within six months.<sup>52</sup> The notice ordered removal of equipment and hard standing and restoration to woodland within a year. In mid-2018 it emerged that UKOG did not even have permission to access the site – the landowner terminated it in 2017.

The PEDL 126 which includes Markwells Wood was extended to its third production term with failed exploration/appraisal work commitments. This was uncovered through an FOI request.<sup>53</sup>

UKOG finally began restoration in December 2018, having delayed and neglected to inform shareholders that Markwells Wood had failed. As late as November 2018, just before UKOG started restoring the site and long after it lost access to it, shareholders were told that Markwells Wood was an ‘oil discovery pending development and/or appraisal drilling’.<sup>54</sup> The OGA repeated that false news in its November 2018 report, saying that a horizontal well would be drilled by 2020.<sup>55</sup>

They finally admitted to the site abandonment on January 23rd 2019.<sup>56</sup> Investors were being given an upbeat version of events, very different to the reality. No exploration work had been carried out at the site since 2011.

Financial regulators have taken no action against the provision of false information and the Government’s own regulator, the OGA, actually repeated it.

This case study raises many issues relating to the regulation of the site, which was operating under pre-2013 conditions when an EA permit was not required. There was an overreliance on self-regulation by the operator because the regulations are based on the presumption that the operator will act responsibly and will comply with the regulatory framework.

Various issues arose over the time the site was in operation or awaiting further permissions. As a pre-2013 site, the HSE fulfilled the monitoring role. However MWW report that: ‘Throughout the history of the oil well at Markwells Wood no personnel from either the EA or the HSE inspected the site, despite the loss of fluids in the drilling of the well. In their reply to MWW, the HSE confirmed that ‘the operator declared fluid losses as part of their operations report sent to the HSE each week during drilling activity’. No further action was taken’.<sup>57</sup>

On the issue of potential groundwater pollution MWW asked the HSE about regulation relating to hydrogeology. They replied that the vulnerability of the hydrogeological zone was not within their remit; they considered the existing regulatory regime suitable to deal with Markwells Wood. The evaluation of risks to groundwater also were not within their remit. They referred MWW to the EA over permitting and the management of waste. They also stated that they had not received, by 20 December 2018, any weekly reports from UKOG about their work in decommissioning the well despite this being a requirement for operators.<sup>58</sup>

When MWW approached the EA they replied: ‘A permit was never issued by the EA for the

52 <http://www.southdowns.gov.uk/planning/enforcement/planning-enforcement/planning-enforcement-register/breach-of-condition-notices/>

53 [https://www.whatdotheyknow.com/request/pedl126\\_deeds\\_of\\_variation?unfold=1#incoming-1082549](https://www.whatdotheyknow.com/request/pedl126_deeds_of_variation?unfold=1#incoming-1082549)

54 [http://www.lse.co.uk/share-regulatory-news.asp?shareprice=UKOG&ArticleCode=djyIf7ArticleHeadline=EWT\\_Update\\_Portland\\_Kimmeridge\\_OilDiscovery](http://www.lse.co.uk/share-regulatory-news.asp?shareprice=UKOG&ArticleCode=djyIf7ArticleHeadline=EWT_Update_Portland_Kimmeridge_OilDiscovery)

55 <https://www.ogauthority.co.uk/media/5143/retention-areas-agreed-17-november-2018-updated.pdf>

56 <https://www.share-talk.com/uk-oil-gas-plc-lonukog-2019-2020-strategy-and-drilling-plans/>

57 Environmental Information Request (EIR) Reference No: 201802299

58 EIR Request Reference No: 201811322



**Keith Taylor has joined communities around the South East, like here at Horse Hill, protesting at oil and gas exploration on their doorsteps.**

59 Freedom of Information request 181210 SSD108150

60 <https://www.gov.uk/government/publications/decommissioning-onshore-oil-and-gas-wells-drilled-before-1-october-2013>

61 [https://planning.surreycc.gov.uk/planappdisp.aspx?AppNo=SCC%20Ref%202018%2F0152&fbclid=IwAR2\\_MrmtOMYyBgZQb5TW13a0e0en0xKtf9nWszlx8sJ\\_KACgbxaSkDJTAIq](https://planning.surreycc.gov.uk/planappdisp.aspx?AppNo=SCC%20Ref%202018%2F0152&fbclid=IwAR2_MrmtOMYyBgZQb5TW13a0e0en0xKtf9nWszlx8sJ_KACgbxaSkDJTAIq)

62 [http://irpages2.equitystory.com/websites/rns\\_news/English/1100/news-tool---rns---eqs-group](http://irpages2.equitystory.com/websites/rns_news/English/1100/news-tool---rns---eqs-group)

63 [https://www.keithtaylormep.org.uk/sites/default/files/download/2019-01/KeithTaylor\\_HorseHillobjection\\_31012019.pdf](https://www.keithtaylormep.org.uk/sites/default/files/download/2019-01/KeithTaylor_HorseHillobjection_31012019.pdf)

Markwells Wood site and therefore we do not have any regulatory remit for it. As a result, the plugging and abandonment of this site will fall under the regulatory remit of the HSE'.<sup>59</sup>

With the buck passing between the regulators, MWW was forced to keep applying for information using the various rights to gain information and was left with little faith in the regulators because the operators were effectively self-regulating. There is little evidence of joined-up thinking or constructive joint action between the HSE and the EA, which would have led to better regulation of this situation.

The Regulatory Position Statement issued by the EA, offers no assurance to communities that proper standards are being applied in the decommissioning of older wells since, as elsewhere in the regulation, the EA relies on the operator to confirm that they have complied.<sup>60</sup> Without onsite supervision there is no guarantee that remediation work will be completed satisfactorily. Should it be done badly, and pollutants enter the water supply, the damage could be irreversible.

In this case financial securities were not taken from the operators for the restoration and aftercare of Markwells Wood. Wider use should be made of this power to put a bond in place because of the uncertainty of future viability of some of these companies. This would shift the 'polluter pays' liability away from the public purse and back to where it belongs – with the operator.

## **SITE: HORSE HILL, SURREY OPERATOR: HORSE HILL DEVELOPMENTS (HHDL) (PART OF THE UKOG GROUP OF COMPANIES) LICENCE NUMBER: PEDL 137 AND 245**

### **Failings:**

- **Temporary to permanent permissions**
- **Earthquake risk not addressed**

HHDL is currently testing oil flows from its two wells at Horse Hill. Now they want to add four new production wells and a well to dispose of contaminated waste water. The planning application is for 25 years and makes claims about producing more than 500 tonnes of oil a day, with high hopes of producing more.<sup>61</sup> If achieved, this would make Horse Hill the UK's second largest onshore oil producing site and UKOG (the parent company) the third largest onshore oil company in the UK.

The site, which is in the London Metropolitan Green Belt, started with well testing in 2014 as a temporary permission. Evidence of the applicant's intentions for its current plans is clear from HHDL CEO Stephen Sanderson's statement from October 2018: '*Permanent* production at Horse Hill is targeted in 2019'.<sup>62</sup>

In its planning application to SCC HHDL argues that one of the main material considerations is: 'the existence of a fully formed and operational well pad with existing wells at the site... Retention of the site is the best environmental option (minimising the need for land and the use of natural resources) and the most sustainable solution'.

HHDL say their application should be approved because of previous permissions. Local authorities must be free to decide on each application as it arises, without being pre-determined by past applications.

The present position is that each stage of an oil development application is treated separately. At the initial application stage, for exploration, the planning authority is not able to require the assessment of future stages of development.<sup>63</sup> All stages of an onshore oil development should



be set out in a ‘whole life’ plan for a site with an assessment of the impacts at the earliest possible stage. However this is not the current position.

HHDL’s intentions have been clear for some time – CEO Stephen Sanderson has stated that he wants to see ‘back to back wells in an industrial process.’<sup>64</sup> That is what the current application is for. The planning authority could not take this into account in 2014 when it granted permission for exploration. Its hands are not tied by that decision even if HHDL would have it so. It could not have foreseen or been able to assess adequately the environmental impacts of 25 years of commercial production at the scale described at the site. Nor could the changed environment for carbon emissions have been foreseen at that time, with now dire warnings about the need to restrain fossil fuels extraction.

It is clear from this proposal that operators should be required to provide a lifetime plan for the site with the environmental impacts assessed at the earliest possible stage. This would enable planning authorities to make a judgement based on the full picture, rather than the initial fraction of it.

This is not an isolated case. In North Yorkshire Third Energy is challenging the meaning of the term ‘temporary’ with its 56-year long ‘temporary’ permission at Pickering.

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## EARTHQUAKES IN SURREY

From April 1st 2018 a swarm of quakes hit Surrey, causing public anxiety over a wide area for several months. Both the Brockham and Horse Hill oil sites were implicated from the outset. The British Geological Survey (BGS) launched an investigation into the possible causes of the quakes and installed more seismographs in the area around the epicentre near Newdigate. These new monitors revealed that the quakes were shallow – at the same depth as the nearby oil wells – despite claims to the contrary by the oil companies. Nonetheless the OGA, advised by the BGS, applied a series of criteria, using metrics from the Brockham wellsite eight km away, and concluded the quakes were natural.

The Newdigate Swarm of earthquakes is located on a small fault running North East from the cluster to the Horse Hill oil well, just three km away, which is bored through it. The Weald Action Group<sup>65</sup> claimed to have evidence of activity by contractor Doriemus at Horse Hill on April 1st,<sup>66</sup> when HDL said the site was inactive. The assessment by the OGA is based partly on this claim. The Weald Action Group said at the time: ‘It speaks volumes that the only way to reach the finding that the earthquake swarm is natural, is to disregard the existence of the Horse Hill well site altogether, and this is exactly what has been done.’ An independent investigation by Edinburgh University concluded that the earthquakes were induced by exploration activity, and produced a hypothesis which shows how Horse Hill well could have triggered them.<sup>67</sup> At the time of writing (February 2019) the earthquakes have restarted and are strong enough to be felt. Although there is activity at Horse Hill drill site no further investigation has been announced.

The 2018 swarm caused serious damage to property – three homeowners experienced a landslip in their gardens with repairs estimated at £600,000 for which they are liable.<sup>68</sup>

The Weald Action Group criticised the OGA for acting both as promoter of the oil and gas industry and regulator. At its heart is a conflict of interest which might lead to a different approach to risk than if an independent body was making decisions about operational risk. Despite the possible risk of carrying on drilling in an area now shown to be unstable geologically, calls for a moratorium were ignored.<sup>69</sup>

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64 [https://www.youtube.com/watch?v=Y0Nybav\\_lcc&feature=youtu.be](https://www.youtube.com/watch?v=Y0Nybav_lcc&feature=youtu.be) – February 2016

65 <https://drillordrop.com/2018/11/22/surrey-earthquakes-no-link-to-oil-and-gas-sites-says-report-but-one-expert-disagrees/>

66 <http://www.doriemus.co.uk/wp-content/uploads/2018/04/DOR-ASX-Quarterly-Activities-Cashflow-Reports-updated.pdf>

67 <http://editor.ogauthority.co.uk/media/5173/10-weald-basin-earthquakes-induced-oga-workshop-hazeldine-cavanagh-oct-2018-low-res.pdf>

68 <https://editor.ogauthority.co.uk/media/5162/9-sellely-newdigate-notes-4-the-oga.pdf>

69 <https://www.keithtaylormep.org.uk/news/green-mep-backs-experts-call-surrey-earthquake-drilling-moratorium-new-water-injection-data>



**Lorry leaving an unauthorised route from Lidsey oil site, West Sussex.**



**Broadford Bridge has been a focus for objections.**

*Credit: Weald Oil Watch*

## **SITE: LIDSEY, WEST SUSSEX OPERATOR: ANGUS ENERGY LICENCE NUMBER: PEDL 241**

### **Failing:**

- **Breach of planning condition and Section 106 agreement (for deliveries)**

Angus Energy has permission for ten years of oil production at Lidsey in West Sussex and in February 2019 was allowed 24 hour working seven days a week. There are currently two boreholes, the earliest drilled in 1997 and another in 2017. There is a relatively low level of production and Angus Energy says it has no plans to intensify or expand its operations there.

There was a Section 106 agreement attached to the planning permission, which prohibited HGV site traffic from using the footpath from the A29 as entry to or exit from the Lidsey site. In 2017 there were a number of breaches of this legally binding permission. Monitoring by local residents caught lorries using a footpath, instead of the designated route. A sign indicating the route to follow was also removed.

Despite a Council warning in July another delivery lorry used an unauthorised route to the Lidsey oil field site in a matter of days. Weald Oil Watch videoed the breaches and reported them to the local authority.<sup>70</sup>

## **SITE: BROADFORD BRIDGE, WEST SUSSEX OPERATOR: UKOG LICENCE NUMBER: PEDL 234**

### **Failings:**

- **Alleged breach of planning condition**
- **Failure to consult local residents**
- **Highlights inability of councils to monitor sites**

The development at Broadford Bridge dates back to February 2011 when permission was first granted. It was originally owned by Celtique Energie, but taken over by UKOG in 2016. It is currently not active but new work is planned for 2019. The CEO of UKOG said in March 2018 of his aspirations for the Kimmeridge Layer (KL): 'As our understanding of the KL deposit progresses, we are exploring new methods and technologies that might enable us to achieve higher sustainable oil rates and commercial viability from the 1400 vertical feet of oil-saturated KL reservoir rock interpreted at BB-1z and our future KL wells.'<sup>71</sup>

The original permission given to Celtique Energie was to drill for gas, but this changed to an oil operation from the Kimmeridge when UKOG took over. West Sussex County Council (WSSC) said no new permission was required as it was still a fossil fuel operation. No public consultation was carried out on this change, despite there being a significant difference in traffic impacts.

There have been repeated complaints by local residents about Sunday operation onsite against planning permission conditions. In 2014 a West Sussex resident made a report to county council planners that people were working at the site on the morning of Sunday September 28th. A spokesperson for WSSC said: 'We contacted the operator who has confirmed that there are security personnel on the site at all times, but no work has taken place outside of the permitted hours, and that they will ensure this is the case.' This was despite reports from a number of people who live close to the site having been woken up at 4am by lights, workmen and machinery noise. The spokesperson said the planning team would continue to monitor the site's operations, through the site operator and local contacts, but then conceded its staff could not be present at all times to ensure conditions were complied with.

<sup>70</sup> <https://drillordrop.com/2017/08/09/lidsey-approval-for-drilling-but-rig-delayed-and-planning-permission-breach-again-within-days-of-council-warning/>

<sup>71</sup> <https://drillordrop.com/2018/03/29/ukog-suspends-broadford-bridge-and-announces-two-new-weald-drill-sites/>

The same problem occurred again on several Sundays in October 2017. Local residents again complained but UKOG pleaded the need to work seven days a week for safety reasons. WSCC took the position that the breaches were not serious enough to take formal action against the company.

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Broadford Bridge Action Group commented: *'UKOG openly admits to working out of permitted operating hours because there is no penalty for them doing so. This makes a mockery of the conditions of operation and further confirms that the regulatory authorities are not fully regulating activities on site'*.

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Sunday and other out-of-hours working can clearly be very disruptive to local residents and businesses nearby and planning conditions are put in place for that reason.

UKOG withdrew activity from Broadford Bridge in March 2018 because of non-commercial oil flows, but plans to apply for a new sidetrack well in 2019.

**SITE: KIRBY MISPERTON, NORTH YORKSHIRE OPERATOR: THIRD ENERGY  
LICENCE NUMBER: PEDL 80**

**Failings:**

- **Breach of environmental permit**
- **Financial uncertainty**

Third Energy was the first company to gain permission to frack for gas after earthquakes stopped drilling in 2011 near Blackpool, at Kirby Misperton in North Yorkshire. It had a protection camp nearby from 2016 and was the subject of four reported breaches of environmental permits in 2017-18.

The breaches included: failures in bunding which is used to contain chemical pollution; poor management procedures and monitoring. However, the company said these were minor breaches and 'the general public should be reassured by this evidence of both the rigorous and meticulous nature of the Environment Agency's inspection regime and their commitment to publishing their work in regard to onshore hydraulic fracturing operations'.<sup>72</sup> No enforcement action was taken although a warning was given. The breaches were not publicised until a month after the incidents occurred.

The EA inspection followed complaints about unpleasant odours from the site, with a rise in hydrogen sulphide levels. One woman received medical attention. According to the company, the odour was the result of routine cleaning operations and there were no health and safety issues. However, the chemical inventory for the fracking operation includes potentially hazardous chemicals.<sup>73</sup>

Third Energy has not been able to frack at the site pending a Government assessment of the firm's financial resilience. It failed to file 2017 accounts on time (still not filed at the time of writing for some parts of the company) and increased its borrowing. This is an example of good regulation with the Secretary of State not permitting fracking because of concerns over financial resilience and the ability to meet decommissioning costs.

Kirby Misperton is also at the centre of a dispute about the legal definition of fracking and planning constraints around fracking applications.

<sup>72</sup> <https://drillordrop.com/2018/05/24/third-energy-warned-over-two-more-permit-breaches-at-fracking-site/>

<sup>73</sup> <http://spinwatch.org/index.php/issues/climate/item/5999-frack-firm-third-energy-warned-by-environment-agency-for-multiple-environmental-permit-breaches>



## SITE: PNR, LANCASHIRE OPERATOR: CUADRILLA LICENCE NUMBER: PEDL 165

### Failings:

- Breaches of environmental permit
- Breach of planning
- Lack of adequate emergency procedures
- Potential weakening of regulation on earthquake traffic light system
- Lack of information provided by the operator

Cuadrilla's PNR in Lancashire is probably the UK's most infamous drilling site, as the first high volume fracking site since earthquakes near Blackpool stopped drilling at Preese Hall in 2011. That incident led to an overhaul in regulations which were quickly put to the test after drilling started at PNR last October.

Cuadrilla called the Government's decision to allow fracking to start in July 2018 a testament to 'our strong track record of running a world-class shale gas exploration site at PNR, in compliance with robust health, safety, environmental and planning regulation.'<sup>74</sup>

But confidence in the regulatory process was swiftly tested and led to the Government being pressed to consider changing the traffic light system for earthquakes designed to minimise risk.

### Environmental permit breaches

Seven breaches of environmental permits for the site were recorded by the EA in ten months in 2017. They included:

- Surface water containing silt entering a water course on more than one occasion;
- Inadequate water and waste management systems;
- Multiple waste permit breaches including not separating waste properly and storing waste longer than was acceptable on an unpermitted site;
- Faulty air monitoring equipment.

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Details of the waste breaches were not revealed at the time at the local community liaison meeting. Town and Parish council members of the Community Liaison Group (CLG) wrote to the Secretary of State Greg Clark MP: *'If a Regulator is not sharing information with the Community Liaison Group there is no transparency in the system. The CLG is therefore undermined as it is clearly unable to provide the open forum for debate that is necessary around a controversial and untested industry.'*<sup>75</sup>

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In an example of good practice the EA now has a dedicated website section for PNR, with regular bulletins being posted.<sup>76</sup>

### Planning condition breach

The oil rig was delivered to the site in July 2017 overnight in breach of a planning condition, according to Lancashire County Council. The planning permission, granted in October 2016 by then Secretary of State for Housing, Communities and Local Government, Sajid Javid, included a condition which limited lorry movements to the period 7.30am-6pm Monday to Friday, except public holidays.<sup>77</sup>

74 <https://www.theguardian.com/business/2018/jul/24/cuadrilla-gets-go-ahead-to-start-fracking-at-lancashire-site>

75 <https://investigatingbalcombeandcuadrilla.files.wordpress.com/2018/08/decision-letter-to-ministers-from-clg-councillors.pdf>

76 <https://consult.environment-agency.gov.uk/onshore-oil-and-gas/information-on-cuadrillas-preston-new-road-site/>

77 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/778144/16-10-06\\_DL\\_Cuadrilla.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/778144/16-10-06_DL_Cuadrilla.pdf)

Cuadrilla's Chief Executive, Francis Egan, blamed protestors for the breach: 'This was done to avoid yet another major road blockage by protestors with the attendant prolonged inconvenience to local road users and potential impacts on commuter and protestor safety.'<sup>78</sup>

The site's TMP has been subject to many changes because it was continually being breached, mainly on routing in and out of the site. The consultees for these changes were Lancashire Police and highways engineers.<sup>79</sup> In the end, expediency meant it was changed to suit the operator.

### Lack of information

The EA failed to provide air quality monitoring information multiple times in 2018. It blamed faulty equipment, neighbours making complaints about noise and maintenance. This meant that pollutants including harmful particulates (PM<sup>10</sup> and PM<sup>2.5</sup>) and methane, carcinogenic benzene, and toxic toluene were not being measured for considerable periods of time.<sup>80</sup>

### Emergency procedures

Against this backdrop of regulatory failings, the CLG for PNR have repeatedly questioned the systems in place to manage an emergency affecting the area around the site.<sup>81</sup> The Civil Contingency Act (CCA) 2004 requires Authorities and 'Level 1 'blue light' responders' to have coordinated plans in the event of a major incident. Planning for such events in the UK is given to 'Local Resilience Forums'. The local community was concerned about well blowouts and gas leaks – the kind of incident that has occurred at fracking sites in the USA which has led to evacuations of homes, schools and businesses over a wide area.

After over a year of investigation into the failings of Lancashire Resilience Forum's Civil Contingency Planning arrangements, and refusals to reply to requests for information from its constituent members, (Lancashire Fire and Rescue Service, Lancashire Police, Lancashire County Council), a campaigner was successful in bringing an emergency injunction to prevent Cuadrilla from operations, pending the outcome of a Judicial Review into Civil Contingency Planning for the accidents that could arise at PNR. At the time of press, this Judicial Review is subject to an application to the Court of Appeal.

The campaigner claimed that the Head of the Local Resilience Forum, Lancashire County Council, had breached its statutory duty outlined in the CCA and that it had not protected the public. She stated that it had acted unlawfully by failing to adequately advise local schools, homes and businesses of the risks of a gas leak arising at PNR, thereby failing to allow members of the public time to understand the risks of the site, practise evacuation methods and ensure community preparedness.

### Earth tremors

The start of fracking at PNR was swiftly followed by a series of minor earth tremors, and the suspension of operations on frequent occasions. This was a foreseeable impact following on from the Preese Hall quakes in 2011. There were multiple quakes on a daily basis between October and December 2018,<sup>82</sup> monitored by BGS, which has put in extra seismic monitors across the north of England.<sup>83</sup> The OGA is responsible for ensuring strict controls on managing induced seismicity and operates a traffic light system to regulate the seismic impacts of fracking operations.<sup>84</sup> Activities must be suspended if local magnitudes exceed 0.5 on the Richter Scale. A number of the PNR quakes have crossed this threshold, causing much concern amongst local communities near to the site.

78 <https://drillordrop.com/2017/07/25/cuadrilla-condemns-fracking-protesters-for-eight-hour-road-closure-opponents-blame-police-tactics/>

79 [https://www.whatdotheyknow.com/request/changes\\_to\\_cuadrillas\\_traffic\\_ma](https://www.whatdotheyknow.com/request/changes_to_cuadrillas_traffic_ma)

80 <https://www.desmog.co.uk/2018/10/29/fracking-company-cuadrilla-breached-environmental-regulations-seven-times-10-months>

81 <https://cuadrillaresources.com/wp-content/uploads/2018/08/02-07-18-PNR-CLG-Minutes.pdf>

82 [http://www.earthquakes.bgs.ac.uk/earthquakes/recent\\_uk\\_events.html](http://www.earthquakes.bgs.ac.uk/earthquakes/recent_uk_events.html)

83 <http://www.earthquakes.bgs.ac.uk/research/PrestonNewRoad.html>

84 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/747003/Managing\\_Seismicity\\_Infographic\\_Final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/747003/Managing_Seismicity_Infographic_Final.pdf)



At West Newton in East Yorkshire a catalogue of breaches included small mammals drowning in ditches designed to catch pollution.

It was therefore surprising when the Energy Minister Claire Perry MP appeared to be considering relaxing the traffic light system. She told a fellow MP that the thresholds were ‘explicitly cautious’ and that a higher tolerance might be more appropriate.<sup>85</sup> So far this has proved politically unpalatable, given the level of concern about earthquakes linked to human activity. Indeed the Minister wrote to Cuadrilla backtracking as more and more earthquakes were registered. Since then both Ineos and Cuadrilla have launched a full frontal assault on the traffic light system for earthquakes – calling for a relaxation of the rules.<sup>86</sup>

It is extremely concerning if regulation can be changed for reasons of commercial expediency and to enable potentially damaging operations, and is likely to exacerbate the public’s lack of trust in the system.

**SITE: WEST NEWTON, EAST YORKSHIRE OPERATOR: RATHLIN ENERGY  
LICENCE NUMBER: PEDL 183**

**Failings:**

- **Environmental permit breaches**
- **Overreliance on self-regulation**
- **Lack of coordination by regulators**
- **Lack of engagement with local community**
- **Failing to provide information**

West Newton A in East Yorkshire is the location of a deep well for gas exploration and testing. It gained permission in December 2018 for a three-year extension and another well, which is currently (Spring 2019) being constructed. The operator, Rathlin Energy, also has a neighbouring site, West Newton B. Neither permission allows fracking to take place.

West Newton A has a chequered history with a series of unfortunate events during its last phase of operation and in the current action phase. These included:

- Flooding from the well pad into neighbouring field;
- Dead wild rabbits and hares in onsite drainage ditches which were not barriered off;
- Noxious escapes from the flaring which led to local people reporting adverse health effects;
- Damage to property from seismic testing.

The most serious problems were during testing in summer 2014. In August an incident resulted in an emergency well shutdown. There is strong evidence, according to Frack Free East Yorkshire, that this was a mini-frack that went wrong and damaged the well. There were ongoing gas leaks and noxious smells, and two of the three tests that were planned (including the mini-frack) were abandoned. The EA recorded 19 breaches of permit and took Enforcement Action against the operator, which was followed by an HSE investigation. Local residents had to repeatedly apply for FOI requests to secure this information. Although Rathlin denied it was trying out a mini-frack, its manager was captured on video announcing that was what was going on.<sup>87</sup>

It was the local group Frack Free East Yorkshire which reported this problem to the HSE. They replied: ‘The HSE are seeking verification and monitoring the issue, but there is no one from the HSE present on site. We are relying on Rathlin’s duty to keep us informed. They have to provide a weekly report, however out of courtesy Rathlin informed the HSE two days ago’. The EA was not informed by the company.

85 <https://www.theguardian.com/environment/2018/oct/09/uk-fracking-rules-on-earthquakes-could-be-relaxed-says-minister>

86 <https://www.thetimes.co.uk/article/fracking-company-cuadrilla-wants-relaxation-of-quake-rules-Orcldzvxh>

87 <http://www.frackfreeeastyorkshire.com/incidents/>





**Local communities have had to monitor sites themselves, like the one at West Newton, to check what's going on.**

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On the flaring escapes, the local paper reported residents saying: *'The smell is hideous, very distinctive, pungent and nauseous. It comes in waves. It started last week and has continued since. It fades in and out. The area where they are drilling is very rural and the smell drifts easily a mile away. Depending on the wind, it has at times reached villages like West Newton and Withernwick'*.

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Recently (December 2018-January 2019) there have been numerous breaches of the TMP, with vehicles failing to label themselves as required as Rathlin Energy contractors, and unpermitted routes being taken. East Riding Council has taken no enforcement action. There have been other incidents reported including the drilling fluid hose coming loose.<sup>88</sup>

<sup>88</sup> <http://www.frackfreeeastyorkshire.com/west-newton-a-gallery/#poisoned>

## CONCLUSIONS AND RECOMMENDATIONS

**This report was intended to test this statement:**

*'The UK regulatory regime for shale gas is considered among the most robust and stringent in the world.'*<sup>89</sup>

**Rt Hon Greg Clark MP, BEIS Secretary of State, May 2018**

Even in a rapid analysis of just a few sites, this is clearly a false and misleading claim. Looking at both shale gas and oil sites, the differentiation the Government makes between them is a false distinction designed to deliberately exclude other damaging operations. All oil and gas sites should be subject to top class regulation. The risks of acid fracking in the South of England are as worrying as the risks from hydraulic fracking in the North – in both cases untried and untested on a fully commercial scale in Britain. These site-based case studies highlight a catalogue of failings that threaten our environment, health and safety, as well as the actions that have undermined the trust local communities and shareholders should be able to have in industry regulators. If you have a complete failure in the transparency and accountability from, at least some, of the operators, then there is a need for far stronger independent regulation, to avoid these and other breaches being repeated up and down our country.

This study begs the wider question of what effective industry regulation might look like. Is it possible to regulate an industry that has proven itself completely untrustworthy, by operating underground in ways that are beyond the view of either the public or regulators? This report highlights the urgent need for far stronger and more resilient regulation of extreme oil and gas exploration.

All those who live near an oil or gas site ought to be able to trust that the regulators will work together – for example, if a breach occurs there needs to be certainty that it will be reported to all the regulators. The public should be able to trust that the permit the site is operating under meets modern standards and fully reflects all of the activities that are undertaken at the site. The operator should be required to supply information to the regulators that enable them to do their job properly. If a breach occurs and there is any harm to the local environment or concerns raised about human health then it is reasonable to expect a prompt response from the regulator and information to be made available promptly to the general public. The public should be able to expect regular and independent monitoring and sufficient and robust enforcement, even on seemingly minor issues like traffic breaches or with respect to lighting or noise at night/ outside normal working hours. There are good reasons for these rules; these activities cause disturbance to local people and harm their environment.

The Government has offered to export the UK's model for shale gas extraction around the world.<sup>90</sup> However, as this report demonstrates, this is not the kind of regulatory framework that those impacted by oil and gas operation would recommend to others. It is under resourced with swingeing Government cuts hammering personnel and expertise across the regulatory authorities. It is not operating in a joined-up way and it is not supported by the necessary monitoring and enforcement regime.

Given the onshore oil and gas industry is founded on the release of more carbon to the atmosphere, which is already beyond safe limits, and that its operations involve a mix of toxic

89 <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2018-05-17/HCWS690>

90 In a secret meeting with fracking operators, uncovered in a FOI request by Richard Bales [https://www.whatdotheyknow.com/request/shale\\_gas\\_round\\_table#incoming-1252234](https://www.whatdotheyknow.com/request/shale_gas_round_table#incoming-1252234)

91 <https://dwarshuis.com/earthquakes-groningen-gas-field/>

chemicals and invasive activities with known environmental and human health impacts, the UK must pursue a more sustainable way of securing its energy needs.

There is one issue, however, on which the Government and the OGA are standing firm which is to be welcomed. The shale gas industry is pressuring the Government to increase thresholds for earthquakes, making it more difficult to call a halt to operations that are causing seismic activity. Although the current traffic light system is too simplistic for some, it is providing some protection to communities who are most concerned about repeated quakes induced by human activity. They do not want their local areas to become earthquake zones, like Ohio, which now has more quakes than California, or Groningen in the Netherlands which has experienced over 1500 quakes since extraction for gas began in 1987 – although the majority are below 3.0 on the Richter scale, 100,000 households have reported damage to property.<sup>91</sup> The more nuanced traffic light system which was originally promised would meet some concerns, but in the meantime the system should not be weakened. Until understanding of the geology has improved, e.g. by not drilling through stressed faults and triggering tremors, a cautious approach needs to be maintained. At the time of writing it remains to be seen whether any future OGA review will be carried out by independent scientists, but at the very least, the OGA most recently confirmed in February 2019 there was no plan to weaken the approach.<sup>92</sup>

**The following recommendations, devised in consultation with community groups, aim to address the main areas of concern highlighted in the report.**

## 1 DEFINITIONS NOT FIT FOR PURPOSE

The definitions of conventional and unconventional; fracking and acidisation lead to grey areas in regulation and flaws in the system. Oil and gas companies work hard to avoid having the terms ‘unconventional’, ‘fracking’ or ‘acid fracking’ applied to their operations. Yet acidisation can lead impacts just as serious as fracking operations. The UK definition of fracking has such a high threshold it covers very few operations – of oil wells fracked in the USA, 89% would not be considered ‘fracked’ in the UK.<sup>93</sup>

A higher standard of regulation is supposed to exist for fracking yet breaches seem to occur just as readily on ‘non-fracking’ sites. In the case of oil sites exploring the shale, which are not classified as fracking sites, a new regulatory regime should be introduced, with greater emphasis on the precautionary principle and risk avoidance. There should be a clearer definition and classification of unconventional and conventional reservoirs and operations. Planning authorities and other regulators would then be clearer about the kind of operation they are permitting and the appropriate regulatory regime and level of resources required for monitoring and enforcement. The public in turn would have more confidence about what is planned and would more clearly be able to identify the most damaging operations.

I. The Government should consult on revising its current guidance<sup>94</sup> to introduce clear definitions of conventional and unconventional reservoirs and operations;

II. Acidisation, acid stimulation, acid wash, matrix acidisation and acid fracking should be the subject of a Government-led investigation which would define the terms and require operators to be open and transparent about their plans;

III. Operations that require the use of acid for commercial production should be identified and regulated in the same way as fracking operations. In California and Florida the regulatory body has adopted a procedure to clarify which processes involve stimulation;

92 <https://drillordrop.com/2019/02/06/no-plans-to-review-fracking-tremor-rules-regulator/#more-71961>

93 <http://www.frackfreesussex.co.uk/acidisingfull>

94 <https://www.gov.uk/guidance/minerals>



IV. The definition of fracking should be reviewed. As it is based on water volume it is not fit for purpose and has been disputed in the courts and by at least one minerals and waste planning authority, leading to a lack of clarity and too high a threshold;

V. The heightened regulatory requirements for hydraulic fracking sites should also apply to sites using acid stimulation – for example on depth, well bore integrity, seismicity testing, waste, water protection, public disclosure of chemicals.

## 2 SELF-REGULATION IS NOT EFFECTIVE REGULATION

The great majority of the monitoring carried out by the HSE and the EA is in practice paper-based, comprising the scrutiny of designs, plans and weekly operation reports. There are no resources for on-the-ground monitoring or regular site-based visits. The HSE relies on the operator's weekly reports to trigger any concerns. The EA has the power to inspect sites, but only does so against criteria contained in any permits they may have issued. This leaves a heavy reliance on self-regulation by the site operators. This is against a backdrop of a lack of information, often on grounds of commercial interests, which leaves the regulators often having an inadequate grasp of what is actually going on.

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*'It's difficult to work out what is important and what isn't. So there are risks. Is this leakage tiny and doesn't contain any toxic materials, or is it more significant than that? We just don't know. It's pretty obvious from the US example that where there's a lack of information it leads to suspicion and a lack of trust. And I think a lot of the issues around fracking are related to a lack of trust.'*<sup>95</sup>

**Professor Richard Davies, Petroleum Geologist, Newcastle University**

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### Old Wells

Onshore oil and gas wells drilled prior to 2013 were not subject to EA permitting and therefore are not under the EA's scrutiny with regard to plugging and abandonment. There is a programme for bringing these sites up-to-date but these permits are not subject to public consultation. Therefore:

I. This process should be fast tracked and the public fully involved in the updating process. In some cases it is the public carrying out monitoring (see Brockham case study) that has alerted the EA to site problems;

II. The Guidance issued by the EA<sup>96</sup> offers no assurance to communities that proper standards are being applied in the decommissioning of older wells since, as elsewhere in the regulation, the EA relies on the operator to confirm compliance. This loophole should be addressed;

III. In the long term there is an issue about who will monitor the integrity of orphaned (abandoned) wells in the UK. Under current legislation there are many such sites that fall outside the remit of the EA and that pose potential risks to the environment and this should also be addressed.

### Current/new wells

I. The stated intention of the EA and the HSE is to work together to protect people and the environment. This may just lead to each regulator assuming the other is doing the necessary checking. A protocol should be introduced for joint working at sites (see below);

<sup>95</sup> <https://www.desmog.co.uk/2018/10/29/fracking-company-cuadrilla-breached-environmental-regulations-seven-times-10-months>

<sup>96</sup> <https://www.gov.uk/government/publications/decommissioning-onshore-oil-and-gas-wells-drilled-before-1-october-2013>

II. The reforms introduced in 2013 suggest that a more 'hands-on' approach has been adopted in the regulation of new unconventional wells. Time will tell whether this is really the case or whether the cuts in manpower have severely reduced the capacity of the EA and the HSE to deliver an adequate monitoring regime. If the Government insists on continuing to promote onshore oil and gas it must fund the necessary regulation, monitoring and sanctions to go with it';

III. Companies should be required to provide information about site operations – e.g. chemicals used and activities – both when applying for permissions and permits and in a publicly available daily log. If any information is commercially sensitive it should at least be made available to regulators. Communities should have the right to know which chemicals will be used throughout the planned operation at the planning consultation stage, not just through the environmental permitting regime;

IV. Commercial sensitivity appears to be an excuse for not providing information to the public. The bar on this should be raised. Access to environmental information is required under the Aarhus Convention<sup>97</sup> and this industry should not use excuses to bypass its requirements with the aim of avoiding public scrutiny.

### 3 WHAT GOES ON UNDERGROUND

As well as the example from Brockham of a sidetrack being drilled without planning permission, there are other examples of 'out of sight, out of mind' operations. In the case of Barton Moss and Ellesmere Port<sup>98</sup> (Igas is the operator at both sites) wells were drilled much deeper than the planning permissions allowed for. The 2018 Horse Hill application is for four new oil production wells and mentions that side tracks will be drilled, but they are not included in the application itself.

I. Clear guidance is needed on planning consents in relation to operations underground including a new regime for monitoring and checking underground permits are being complied with.

### 4 EARTHQUAKE RISKS AND EMERGENCY PROCEDURES

The debates about human-induced seismicity near oil and gas sites mean that a review of mitigation measures would be timely. The Government, OGA and BGS have a key role to play in protecting communities from material damage and to remove concern and anxiety that is caused by even small quakes in an area. Most local communities agree that there is no acceptable level of quakes associated with oil and gas extraction whilst the companies are arguing for a relaxation of standards. A small quake at the surface will be much stronger below ground at the point where the earthquake has been triggered, and it can do significant damage to the well, allowing potential leaks.

The BGS has recently set up a team to investigate seismic risk caused by fracking (the EQUIPT4RISK project): 'If significant shale gas development and fracking goes ahead in the UK we need to be confident that all risks have been identified and can be managed safely over the whole lifetime of the operation, and not just at its start.'<sup>99</sup> No decisions about mitigating induced seismic risk should be made until this research project publishes its findings despite pressure from fracking companies Ineos and Cuadrilla to weaken the criteria for pausing activity.

I. The traffic light system for induced seismicity should, as well as covering hydraulic fracturing, focus on other operations which might cause quakes, including acidisation, water reinjection and pressure release;

97 <http://ec.europa.eu/environment/aarhus/index.htm>

98 <https://drillordrop.com/2017/08/14/council-tells-igas-it-drilled-ellesmere-port-gas-well-1000m-deeper-than-planning-approval/>

99 [https://www.bgs.ac.uk/research/highlights/2018/UnconventionalHydrocarbons\\_UK.html](https://www.bgs.ac.uk/research/highlights/2018/UnconventionalHydrocarbons_UK.html)

- II. In the absence of detailed 3D seismic surveys, operators should be required to install a geophone array (seismographs) around well sites to show up faults;
- III. Independent research should be commissioned to establish a statutory respect distance which should be introduced for drilling near faults;
- IV. Operators should be required to provide information about the extent and nature of their activities on site on any given day, throughout the day and night, so that an accurate correlation can be made between their operations and any quakes. This should include details of plant and materials used. There should be no excuse of 'commercial confidentiality' between operators and regulators;
- V. Monitoring and mitigation should continue after the lifetime of an operation for any residual effects (e.g. damage to well integrity in the longer term);
- VI. The traffic light system should be more nuanced as originally recommended,<sup>100</sup> so that stronger seismicity requires a longer moratorium on activity;
- VII. Where there are questions about induced seismicity, with no identified cause, there should be a moratorium on any oil or gas activity and on any new permissions until an inquiry into the cause has been completed.

### Emergency Procedures

Where there is a risk of an emergency incident (e.g. a well blowout, gas leak or chemical spill), procedures should be in place to protect the public. Because onshore fracking and acid stimulation are new to the UK at industrial scales it seems the regulatory bodies are waiting to see what happens, rather than taking pre-emptive measures to mitigate risk.

- I. The CCA should cover operations at oil and gas sites to protect the public. This would mean the designated Local Resilience Forum taking a lead on advising local schools, residents and businesses of the risks and allowing members of the public time to understand the risks of the site, practice evacuation methods and ensure community preparedness.

## 5 KEEP DECISION MAKING IN THE HANDS OF LOCAL PEOPLE

Regulation is more likely to succeed when local communities participate in the decision making process. Planning for extreme oil and gas can also work better for operators and local communities if unsuitable applications are quickly weeded out. These applications should not be against the wishes of locals and others – promoting an unpopular industry in which there is no public confidence either in the operators or regulators is politically very damaging.

- I. Instead of fast tracking fracking the Government should issue a moratorium on unconventional onshore oil and gas exploration across the UK in line with its legally binding carbon commitments;
- II. Alongside this the Government should review and enhance the regulatory framework and delivery mechanisms such that they are fit for purpose;
- III. Decision making should be kept in the hands of local authorities, and separately made at each stage of development. If fracking or acidisation will likely be involved at later stages any early decisions should be made in that knowledge. The risk of a site should decrease with subsequent planning permission, not expand. This should also be reflected in EIA and SEA, as required;

<sup>100</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48330/5055-preese-hall-shale-gas-fracturing-review-and-recomm.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/48330/5055-preese-hall-shale-gas-fracturing-review-and-recomm.pdf)



IV. Local people should be consulted before planning permission is sought in all cases – this is already supposed to be the case for fracking proposals (under the UKOOG code for community engagement). It should also be the case for acidisation proposals and any other applications for unconventional oil or gas exploration.

## 6 THE BOTTOMLESS CUP OF LICENCE EXTENSIONS

The OGA has a system that routinely breaks its own rules about licence extensions. Licences are extended time and again – sometimes for decades – without any progress through the stages of operation being made. Some licences have been allowed to leap from exploration to production without an appraisal and testing phase. At the same time there is a high failure rate of licences (data shows 80% were relinquished between 1996 and 2015).<sup>101</sup>

I. The phenomenon of the constantly renewed licence despite no drilling or drilling failing to pass through the designated phases – should cease. It causes uncertainty for local communities and can blight whole areas as targeted for oil or gas exploration when there is no real prospect of development going ahead;

II. Licences should be subject to surrender and not reallocated if no suitable site can be found in a licence area within the allocated time. This would free wide swathes of the countryside from the blight of oil and gas;

III. There should be no such thing as a ‘temporary’ planning permission for hydrocarbon operations onshore. Under the PEDL regime these can continue indefinitely. The planning system is the only accountable and democratic means of regulating the indefinite continuation of these operations<sup>102</sup> and should provide for time limited, rather than temporary, permissions.

## 7 THE CLOSE RELATIONSHIP OF THE OGA WITH GOVERNMENT

The OGA is a government company with one main job: ‘to maximise the economic recovery of the UK’s oil and gas resources’.<sup>103</sup> It also acts as a regulator – handing out and withdrawing licences to drill. It has one shareholder: currently Greg Clark MP, BEIS Secretary of State under the Energy Act 2016. It has a conflict of interest at its core: to promote the industry and regulate it.

I. There is a need for independent scrutiny which would provide confidence that regulation could work effectively without bias from the promotion of the industry by Government.

## 8 FINANCIAL REGULATION IS FAILING

Both the Brockham and Markwells Wood case studies show that shareholders cannot rely on companies to give them accurate information on which to base their investment decisions. Yet the financial regulators of the AIM stock exchange, where these companies are listed, apparently take no action against these false claims.

I. The OGA should carry out independent scrutiny of the claims of companies, rather than just reporting the information they are given;

II. The Stock Exchange can intervene in cases where companies mislead shareholders and the public and should introduce a more rigorous monitoring and enforcement regime for companies where clear breaches have occurred. It can report breaches to the Financial Conduct Authority and should do so – these should be publicised as there is currently no transparency in the system.

101 <https://drillordrop.com/2018/12/21/investigation-reveals-high-failure-rate-for-onshore-oil-and-gas-licences/>

102 PEDLs are considered as common law contracts, extendable at will by the parties to the contract (PEDL) without the statutory regime (Parliament) able to intervene. <https://drillordrop.com/2019/01/14/guest-comment-how-temporary-is-temporary/>

103 <https://www.ogauthority.co.uk/about-us/what-we-do/>

## 8A BONDS

Related to this issue is the uncertain financial base of some onshore oil and gas exploration companies. They appear to be operating as a Ponzi scheme, with share prices being ramped up on the basis of optimistic predictions which are often unfounded or based on short term results (like the Gatwick Gusher moment). Share prices are valued in pence and borrowing is rife with sites being bought and sold between companies. UKOG operates each site under a different company, thus shifting liability away from the parent company. These are the companies which planning authorities are being asked to trust with a decommissioning plan some years off, after a major industrial operation with potential impacts on all aspects of our environment.

The question of who pays for decommissioning of sites has been raised by Conservative MP Lee Rowley at the Public Accounts Committee when he said: 'Whatever one's thoughts on the fracking industry as a whole, it cannot be right that these questions, which could lumber the country with hundreds of millions, or even billions of pounds, of liability, are unanswered now many years into attempts to frack.'<sup>104</sup>

I. Bonds are uncommon in planning decisions, but in these cases are vital to provide certainty and to prevent the taxpayer having to foot the bill for future clean-ups. They should be a condition of any planning approvals;

II. There should be a statement of liability attached to planning decisions, so that there is clarity over who is responsible for any problems even after decommissioning and the oil company's lease has ended.

## 9 THE ISSUE OF THE SINGLE REGULATOR FOR FRACKING AND JOINED-UP REGULATION

The Government set up a single regulator for shale in October 2018 – 'one, coherent, single face for local authorities and industry'. A 2015 report by the Government's Task Force on Shale Gas, which was funded by shale gas companies, called for an independent regulator to monitor shale gas sites. Lord Smith, who chaired the task force and who used to chair the EA, said: 'If the industry develops and the number of applications rises, there will be a need for a single, simplified system.'<sup>105</sup> He said local communities would be involved in the monitoring process. This was picked up by the Government in 2018. In a joint Ministerial statement by James Brokenshire and Greg Clark, announcing plans to fast track fracking, they said: 'the Government is setting up a Shale Environmental Regulator which will bring the regulators together to act as one coherent single face for the public, mineral planning authorities and industry'.<sup>106</sup>

However, the announced regulator seems unlikely to deliver what is needed. Although it is early days to assess its effectiveness, it apparently comprises just three staff with a budget of £75,000 and has no teeth. The main emphasis seems to be 'coordination and communication', sharing best practice and improving efficiency.<sup>107</sup>

Given the lack of any powers, a small body of seconded staff, low budget and lack of critical mass it seems unlikely this will address many of the serious regulatory problems highlighted in this report.

There remains an absence of joined-up, effective and well-resourced regulation for the multitude of onshore oil and gas operations.

I. A set order procedure should be considered for obtaining permits/and planning permissions to assist joined up decision making;

II. A memorandum of understanding should be in place at individual sites setting out a

104 <https://drillordrop.com/2019/02/11/senior-officials-failed-to-give-clear-answers-on-decommissioning-of-fracking-wells-mp/>

105 Lord Smith: <https://www.bbc.co.uk/news/business-32041168>

106 <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2018-05-17/HCWS690>

107 Revealed in answers by the Energy Minister Claire Perry to Lee Rowley MP, Chair of the All Party Parliamentary Group on fracking and reported here <https://drillordrop.com/2019/01/22/minister-reveals-details-of-new-shale-regulator/>

protocol for liaison between regulators. Better coordination is needed between regulators so that if a change in conditions is applied for to one regulator, all involved should be notified (this may have prevented the drilling breach at Brockham occurring);

III. A public, searchable notification system like that used by the EA for PNR should be introduced. This should be extended to cover all active oil and gas sites.

## 10 COMMUNITY ENGAGEMENT

The voluntary system of community engagement through UKOOG and individual companies is failing. It is not transparent – UKOOG will not disclose who its members are – and there is no public reporting on the terms of the Charter for Community Engagement or sanctions taken against companies which fail to comply. Effective regulation of this industry requires local communities to be engaged in operations at individual sites.

I. There should be a statutory requirement for community engagement and consultation in line with the voluntary charter – i.e. from the outset – before a planning application is made – and at all stages of planning. The Government has been consulting on this and if there is to be any improvement on what has turned out to be a lack of social acceptance of this deeply unpopular industry this needs to happen. Developers should be required to report on this to the planning authority as part of the planning application process;

II. It should be a meaningful consultation, not just a tick box exercise. A recommended procedure for community engagement should be drawn up, so that companies cannot get away with one information event as their community engagement.



## FINAL WORD

**This research has catalogued an extensive set of problems relating to the regulation of the extreme onshore oil and gas industry which begs the question of whether it can be effectively regulated.** The regulators cannot be on the ground 24/7 to monitor operations, and the reliance on self-regulation and form filling is failing local communities and environmental protection.

Local communities have been left to monitor sites themselves and, with their logs and photos tell a graphic account of an industry which is failing. Complaints are often not listened to, enforcement not carried through and the industry carries on with business as usual. Not only is this not gold-plated regulation, but even effective regulation seems very difficult to achieve in the current context of a Government, regulators and industry working together to promote fast track fracking and other forms of extreme oil and gas extraction.

It is time for the regulators to send a strong message to companies who might be tempted to play fast and loose with the rules; companies found deliberately or negligently flouting the rules should not be allowed to drill for oil and gas. Refusing retrospective planning applications in cases where there has been a flagrant disregard of the rules should not be something MPs fear. The regulatory system should operate with teeth or it fails the environment and communities affected by oil and gas extraction.

The recommendations in this report would be costly and complex to implement. The industry operates piecemeal and small scale and is, by its nature, difficult to monitor. But there is a real danger in the Government promoting an industry where standards are not good enough, and possibly cannot be made good enough to protect our communities and environment. There should be no expansion of this industry – the focus should be on properly regulating our historic wells.

Ultimately this industry is founded on unsustainable levels of pollution which are damaging our climate, the air we breath and the water we drink. The alternatives are already here and available – greater efficiency and renewable energy to meet the need for energy that remains. We have no choice but to change how we get our energy as we are already on track to breach our commitments enshrined in the Paris climate agreement.<sup>108</sup>

<sup>108</sup> <https://www.bbc.co.uk/news/science-environment-47144058>

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- **MAX ROSENBERG**
- **WEALD ACTION GROUP**
- **WEALD OIL WATCH**

## ABBREVIATIONS

- AONB** Area of Outstanding Natural Beauty
- AQEG** Air Quality Expert Group
- BEIS** Department for Business, Energy and Industrial Strategy
- BGS** British Geological Survey
- CCA** Civil Contingencies Act (2004)
- CLG** Community Liaison Group
- DCLG** Department for Communities and Local Government
- DECC** Department of Energy and Climate Change
- EA** Environment Agency
- FOI** Freedom of Information
- GHG** Greenhouse gas
- HFC** Hydraulic Fracturing Consent
- HHDL** Horse Hill Development Ltd.
- HSE** Health and Safety Executive
- IA** Infrastructure Act (2015)
- KL** Kimmeridge Layer
- MPA** Minerals Planning Authority
- MWW** Markwells Wood Watch
- NIEA** Northern Ireland Environment Agency
- OGA** Oil and Gas Authority
- PEDL** Petroleum Exploration and Development Licence
- PHE** Public Health England
- PNR** Preston New Road
- SCC** Surrey County Council
- SEA** Strategic Environmental Assessment
- SEPA** Scottish Environment Protection Agency
- TMP** Traffic Management Plan
- UKOG** UK Oil and Gas