

Open letter to the Minerals Planning Committee of West Sussex County Council

Cuadrilla's application to flow test their well at Lower Stumble, Balcombe

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There were over 2,700 objections to Cuadrilla's application to flow test their Balcombe well, only 11 in favour. The planning officer in recommending approval **has ignored the opinion of local people**. It seems that whatever we say, and however many of us say it, we carry no weight. The planning officer appears not to have read our submissions.

I urge planning committee members to read this alternative view from Balcombe before the planning meeting. It contains some relevant new issues and contests some of the assertions in the planner's report.

I wonder to what extent councillors have read the people's objections, and the hard-hitting objections from bodies such as the Campaign for the Protection of Rural England (CPRE) and Frack Free Balcombe Residents Association (FFBRA)? Or have they merely relied upon the planner's report?

Air quality is increasingly a priority for planners. The Environment Agency's comment on Cuadrilla's application says nothing about Cuadrilla's almost complete lack of intention to monitor or mitigate emissions. The planners have not picked up on this. The application includes no analysis of gases to be flared, even though Cuadrilla almost certainly have data on the complete chemical composition of the wet gas that would enter the flare, not just the hydrocarbon components. The Environment Agency has issued a flaring permit that does not set limits for toxic air emissions from the flare. One monthly spot test is all that they require, commissioned by Cuadrilla, the results to be communicated to the Environment Agency.

The method of monitoring should be based not on canisters or sorption tubes but on methods that can record spikes in emissions levels and reflect fluctuations in concentrations of emissions – because a short period of exposure to tiny concentrations of some chemicals may affect villagers' health in the short and long term. Cuadrilla argue that since the toxic emissions are short term, the effects will be negligible, and the planning officer has accepted this. On the contrary, constant

monitoring of the efficiency of the flare is absolutely vital. If the flare efficiency falls below 95%, the flare will start to emit serious amounts of toxins, which will be transported on the prevailing wind towards nearby houses and the village.

Professor Lawrence Dunne of Balcombe contends that monitoring should include sulphur dioxide, dioxins (chlorine compounds possibly present because of the use of hydrochloric acid), benzene, ethyl benzene, xylene, toluene, pyrene, benzanthracene, anthracene, NO_x, sulphur dioxide, carbon monoxide, radon, soot and other particulate matter, and polyaromatic hydrocarbons (for many of which there is no known safe threshold or exposure time). Emissions could exceed National Air Quality Objective levels many times over.

The top of the flare is on a level with our hilltop village. The prevailing wind blows from the site towards the village.

Cuadrilla's vocabulary choices apparently seek to minimise the import of their proposed operations

The so-called Kimmeridge Limestone of the Weald is **unconventional**. There is an error (acknowledged by the British Geological Survey) in National Minerals Planning Guidance, inserted by the DECC in 2014, defining all hydrocarbon sources in limestone and sandstone as conventional. This is not true. This formation is tight, unconventional, and will require considerable resources and energy to extract.

“This type of deposit very much depends on being able to drill your wells almost back to back, so it becomes very much like an industrial process.” That was Stephen Sanderson, CEO of another oil company, UKOG, mapping out his future wells. He says this because, in the Kimmeridge formations of the Weald, oil will almost certainly not be able to flow at commercial rate without multiple drilling and stimulation – which means acidising and ultimately (but not yet) fracking. Cuadrilla's Balcombe well is drilled into the same kind of unyielding, unconventional geology as Sanderson's wells in Horse Hill and Broadford Bridge. Lower Stumble will be amongst the first of a great many wells that will require ‘stimulation’ –fracturing and/or eating away at the rock with acid. At this stage we accept that Cuadrilla will not frack, but acidising brings many of the same risks and negatives for local communities and our environment.

At this test stage, Cuadrilla will need to do more than a simple **‘acid wash’**, which implies just cleaning out the wellbore. To the Environment Agency they have

alternately called their proposed activity ‘an acid wash’ (a euphemism, or at least only part of the story) and **‘a matrix acid wash’** (an unusual expression that means acidising out into the rock formation – the normal expression would be matrix acidising). Note that the Environment Agency is about to create a spurious new definition of ‘an acid wash’ that gives far more leeway to the industry than the traditional understanding of an ‘acid wash’ in industry and geology circles. Cuadrilla will not, we accept, conduct an acid frack at this stage, but will ‘stimulate’ the formation with acid, creating pathways through which oil can flow. This acidising process shares many of the risks of fracking. The planning officer likens the acidising of this hydrocarbon well to acidising water wells. This is nonsense, as water engineers have confirmed to us. Water wells are rarely acidised, and never acidised out into the rock formation. They are lined with plastic, not steel and cement, which can be attacked by acids, and they are not drilled into saline, radioactive, hydrocarbon-bearing rocks!

Cuadrilla and the planning officer call the returned waste liquid **‘nonhazardous salty water’**. This is a euphemism. On the contrary, the waste water is likely to be super-saline, containing naturally occurring radioactive materials and heavy metals from the formation, plus any other chemicals (and their products) that were used along with the hydrochloric acid in the acidising fluid.

Not fracking “...the proposed flow testing operations do not include hydraulic fracturing and for the avoidance of doubt Cuadrilla can confirm that it is not proposed to hydraulically fracture this well in the future.” (Environmental Report 1.1.5, page 6). This was repeated by the planning officer. This statement leaves the stage open, however, for Cuadrilla to flow test the well (without fracking) and then sell the PEDL on to another operator. Then the other operator can apply to frack the site. Our research indicates that it would be necessary first to acid frack the micrite (so-called Kimmeridge limestone) and then to frack the surrounding shale. Note in any case that 88% of oil wells that have been fracked in the USA would not be considered to have been fracked under current UK legislation (since the definition of fracking changed in the Infrastructure Act).

Crucial timing, the birds and the bats and the PEDL

Under the conditions of their PEDL licence, Cuadrilla must have completed flow testing by June 30th, 2019. West Sussex County Council could, therefore, if it chose to ignore the wishes of local people, grant planning permission only until that date, not the requested two years, which would probably take us until January 9th, 2020.

Planning permission could therefore be granted, considering the PEDL conditions alone, for **JUST UNDER 18 MONTHS**

Paying due regard to the wellbeing of local wildlife, including protected species, WSCC can, if they ignore the wishes of local humans, permit works only from November to February. Given the time restraints of the planning meeting in January 2018 and the testing deadline under the PEDL of June 2019, this would leave Cuadrilla possible working windows of:

- mid-January to February 2018
- November 2018 to February 2019

According to the RSK 'Bat activity report', researched at Lower Stumble over the summer of 2017, the five species of **BATS** who frequent the oil site, the nearby ancient woodland, tree plantations and hedgerows are most active from May to September. June is the 'maternity season' when the baby bats especially require nurture and the parents are especially active, foraging across the habitat.

RSK thus recommend that works should be 'planned to occur' from November to April, when the bats are less active, to avoid disturbing their foraging and commuting. RSK also recommend unspecific 'daily working hours' that would least disturb the bats.

According to the RSPB, there should be no flaring from March to August, the most important months here for reproduction of birds. The month of May is again an especially sensitive time.

Hence the narrow working windows.

Not here not anywhere

Hydrocarbon exploration 'will be permitted where it is demonstrated to the satisfaction of the Planning Authority that it is the best option in comparison with other alternative sites.' The people of Balcombe do not want Cuadrilla in their parish, whether or not they are fracking or acidising, conventional or unconventional. We should have a say. But we do not want them anywhere else either. These first 'foot-in-door' wells will lead to industrialisation of the beautiful countryside of West Sussex, including our National Parks and Areas of Outstanding Natural Beauty. The Paris Agreement on climate change renders obsolete or at least myopic the emphasis on hydrocarbons in our misguided National Planning Guidance. Oil is no bridging fuel. We can import until we have rapidly made the transition. Even if planners are obliged

to disregard the future, our councillors can surely not sanction the industrialisation of our countryside.

Water quality, no groundwater permit

Water quality impact is a material concern sufficient to warrant refusal. In Egdon Resources' recent planning appeal against North Lincolnshire County Council's double refusal of their application to acidise an oil well, the planning inspector in this similar case was not convinced that the company had proved that they would not pollute ground and surface waters. To clarify the double negative: they might pollute.

Cuadrilla in our view seek to falsely minimise the toxicity of their acidising fluid and returned wastewaters as 'salty water'. There is ample international evidence of well failure and water contamination via oil wells. Given that no groundwater permit is to be issued to adequately assess and minimise inputs of pollutants to groundwater, it is unclear how the council can conclude that such risks and impacts have been adequately addressed.

The Environment Agency holds no records of acidising prior to 2013, and is still learning. In our view they do not understand the issues, and it is wrong to place confidence in them. Planning guidance says not that the council *must* have confidence in their competence, but that it *should* have confidence. There is a difference, and valid wriggle room, as was demonstrated recently in North Lincolnshire, where the council won their case.

RSK's Environmental Report on Cuadrilla's potential to pollute the water at Lower Stumble says that: "Any release is likely to result in an adverse and direct effect on groundwater, with a medium to long term impact. Groundwater flow in the underlying aquifers is likely to be low therefore residence time of any effect within the aquifer will be high and the effect experienced over a long period". (...) "The period of testing is very short and therefore any predicted effects on the deeper geology and groundwater quality are likely to be negligible despite them potentially being permanent". Given the possibility of well failure and leakage (metal corrodes and cement crumbles, especially over time, wells have a habit of failing...), West Sussex County Council will want to be confident that it has fully assessed the risks to public and environmental health and that they are acceptable.

'With regards to groundwater,' says Chris Bartlett, 'it must be assumed that the well is constructed and operated to the appropriate standards.' That ought to be 'should' not 'must'. West Sussex County Council is within its right to rely blindly on the

competence of other agencies, but is not obliged to do so, as was so usefully pointed out by the barrister for North Lincolnshire County Council.

Repeated failure to do the work, a pattern

Cuadrilla did not come to do the work when they had the permits. They are wasting public time and money and causing great stress to our community. They came too late in 2013 (June, not July as the planning officer says in his report) when they needed to be finished by September. That was tight even without the protests. They did nothing during the planning permission period they won so dramatically in 2014. This little company seems incapable of multi-tasking in both Lancashire and Sussex.

Before constructing the site at Lower Stumble in 2010, did Cuadrilla produce a Ground Condition Report?

The lack of such a report was one of the reasons why the Planning Inspector dismissed Egdon Resources' appeal last week against North Lincolnshire County Council. The council had twice refused Egdon permission to acidise an oil well. Egdon had used a lowest-spec membrane beneath their pad, under- and over-laid with sharp rather than rounded stones, and an inadequate depth of stones for the stress they would have to bear and the nature of the underlying earth.

The council should seek further details of Cuadrilla's new 'containment measures' on the pad, which are sketchily explained in RSK's Appendix 9.2, page 5. The new membranes, extending the former 'protected' area, lie, according to RSK's report, under only part, possibly a third of the site's hard surface, with a small drainage pit, from which water would be pumped out and carted away as necessary.

Cuadrilla appears chronically to have failed to manage flooding of their pad at Preston New Road in Lancashire, and will soon begin to discharge to local watercourses there, having varied their permit. Interestingly, in the Balcombe case, the Environment Agency is 'minded to object' to this application unless Cuadrilla abide by their conditions in respect of the 'containment measures'.

Cuadrilla should be asked to provide details of containment construction and quality assurance for the membranes beneath their site and the nature of the earth and stonework below and above.

Insufficient evidence on potential environmental impacts, no Environmental Impact Assessment

Given the absence of an Environmental Impact Assessment, how can the councillors fully understand the risks? There has been no proper environmental risk assessment of the proposed acidising, which in this formation is not, as stated, a tried and tested technique. Even in other rock formations, the Environment agency has barely bothered itself with acidising until now, and holds no data prior to 2013. Council members and officers, the Environment Agency and the public lack comprehensive information on potential impacts of the proposed activity.

Lack of information about hazardous materials

Other chemicals will be needed as well as acid – biocides, corrosion inhibitors, iron control agents, perhaps hydrogen sulphide inhibitors and clay stabilising polymers... Toxic chemicals including radioactive materials and heavy metals and a load of salt will be released from down under. Cuadrilla underplay their liquid waste as ‘salty water’. These are material considerations that the Planning Committee should consider.

Lack of bespoke emergency planning

In the event of a serious incident, the emergency services currently have no prepared strategies.

Traffic

In a small community such as Balcombe, increased HGV movements to and from the site would have unacceptable impact, despite the temporary nature *of this phase*. The village is particularly concerned that an even greater volume of traffic will pass the village primary school, some of it transporting hydrochloric acid, toxic waste, other chemicals and oil. Looking naughtily (in planning terms) beyond this particular application, development at the site could last for years, including the drilling of numerous further wells on the site. Each time you, our representatives, permit one phase, refusing the next one becomes ever less ‘reasonable’.

We cannot trust Cuadrilla to stick to a Traffic Management Plan. Last time, Cuadrilla’s HGVs passed the school and idled outside it at unauthorized times, and at one period used to sneak in the back way, through an unauthorized back lane. I quote Yorkshire residents Jon and Val Majer,

“It would be revealing to ask Cuadrilla if they can provide an example of any Traffic Management Plan for a shale gas exploration site that has been implemented without

variation amounting to a breach of the plan. Cuadrilla's Preston New Road site, Rathlin Energy UK's sites at Crawberry Hill and West Newton and Third Energy's site at Kirby Misperton have all breached agreements on timings and numbers of vehicles, and routes have been changed at short notice. When complaints are made it proves impossible to find any agency to take responsibility. The police will claim they agreed to change the arrangements at the request of the operator, the operator will claim they were instructed to change arrangements by the police. The local authority will claim arrangements are the responsibility of the police and the operator. If West Sussex County Council are setting conditions, they must name an officer responsible for enforcing adherence."

Peaceful protest, and its costs

Cuadrilla's previous activities at Lower Stumble in 2013 brought huge costs for the local police force in particular. The testing phase under discussion would undoubtedly bring us out in large numbers in renewed peaceful protest. Neither the Government nor West Sussex County Council pay any attention to the overwhelming public opinion against the presence of Cuadrilla in Balcombe. **This is a travesty of democracy, trampling on our human rights. Cuadrilla have no social licence to molest our village.**

Paris, the important change since 2014

This proposed operation is **inconsistent with the need to mitigate climate change**. Policy and law have yet to catch up. But even the National Planning Policy Framework (2012) has climate change as a core planning principle (para 17): "support the transition to a low carbon future" and (para 93) that: "Planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions." We do not need a new extreme fossil fuel industry at this point in energy history. The Kimmeridge formations of the Weald are extreme because they are unconventional, tight, unyielding, extractable only by force and wasteful *expenditure* of energy, meanwhile ruining our peace and happiness, and despoiling our countryside, air, water and climate.