

To: Dr Ann Myatt ppc (Con.) for Westmorland & Lonsdale

From: Dr Henry Adams (consultant ecologist)

On: FRACKING – especially its impacts on health

1. When I met you at the hustings last Thursday organized by the Westmorland Gazette you again put forward your views on fracking, along the lines of:

1. “You know I’m pro-fracking”, and that:
2. You see fracking as a potential way of reducing emissions by reducing our use of coal as happened in the US.
3. You would ensure that fracking in the UK would not result in health-threatening air pollution by ensuring high regulatory standards.

2. I asked you whether you knew that the **New York State have now banned fracking** [following a moratorium to gain evidence] due to “**significant public health risks**” as revealed by now copious research evidence, such as of air pollution [and water supply pollution] which the coalition government has been ignoring. Your statement I’ve numbered ‘3’ above was part of your answer to this point, but evidence-based assessments I refer to below do not share your assurance. As you are a medical doctor I hope you will find of interest the immense amount of evidence on the negative impacts of fracking that is building up, and I look forward to hearing your response to some aspects of these I’m presenting below.

3. Over the last year or so, research papers (and reviews of these) on the **health impacts of fracking** have rocketed in number, but UK government reports appear to have ignored these (maybe by over-restricting their “frames of reference”?). Such impacts include those via pollution of air, ground water, and surface spillage, the latter two affecting drinking water supplies.

This review of a collation of such papers shows this build-up of evidence very well:

By [Concerned Health Professionals of NY: 'COMPENDIUM OF SCIENTIFIC, MEDICAL, AND MEDIA FINDINGS DEMONSTRATING RISKS AND HARMS OF FRACKING \(UNCONVENTIONAL GAS AND OIL EXTRACTION\), 2nd edition, December 11, 2014'](#)

<http://concernedhealthny.org/wp-content/uploads/2014/07/CHPNY-Fracking-Compendium.pdf>

Here are some quotes from this review (and note the first section is a pre-emptive response to your promise in 3. above):

“Here are some emerging trends in the new data.

1. First, growing evidence shows that **regulations are simply not capable of preventing harm**. That is both because the number of wells and their attendant infrastructure keeps increasing and, more importantly, because some of fracking’s many component parts, which include the subterranean geological landscape itself, are simply not controllable. ...

2. Second, **drinking water is at risk from drilling and fracking activities and associated waste disposal practices**. As documented by the Pennsylvania Department of Environmental Protection in a review of its records, 234 private drinking water wells in Pennsylvania have been contaminated by drilling and fracking operations during the past seven years. ...

3. Third, **drilling and fracking emissions often contain strikingly high levels of benzene**. A potent human carcinogen, benzene has been detected in the urine of wellpad workers (at levels known to raise risks for leukemia), in private drinking water wells contaminated by fracking operations, and in ambient air at nearby residences. In some cases, concentrations have far exceeded federal safety standards. Such exposures represent significant public health risks. ...

4. Fourth, **public health problems associated with drilling and fracking are becoming increasingly apparent**. Documented indicators variously include increased rates of hospitalization, ambulance calls,

emergency room visits, self-reported respiratory and skin problems, motor vehicle fatalities, trauma, drug abuse, infant mortality, congenital heart defects, and low birth weight. ...

5. Fifth, **natural gas is a bigger threat to the climate than previously supposed**. Methane is not only a more potent greenhouse gas than formerly appreciated, real-world leakage rates are higher than predicted. ...”

4. Do correct me if I’m wrong: I understand you have a specialism in **skin problems**, and would thus like your comment on this: “**reported skin conditions were more common in households <1 km compared with >2 km from the nearest gas well (OR= 4.1; 95% CI: 1.4, 12.3; p=0.01)**” – p.3 of Rabinowitz et al. 2014: ‘[Proximity to Natural Gas Wells and Reported Health Status: Results of a Household Survey in Washington County, Pennsylvania](http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2014/9/ehp.1307732.pdf)’ (pdf) in ‘ENVIRONMENTAL HEALTH PERSPECTIVES’, National Institute for Environmental Health Sciences (Rabinowitz works at Yale University School of Medicine). <http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2014/9/ehp.1307732.pdf>

5. [Harrison and Parkinson 2015](#) gives another result from the above report: “For example, a recent study in Pennsylvania examining gas concentrations close to shale gas wells found methane in 82% of drinking water samples, with average concentrations six times higher for homes within 1km of a well.”

6. For an excellent concise review of impacts of fracking including not just public health, I highly recommend you read Harrison and Parkinson 2015 update ‘[Shale gas and fracking: examining the evidence](#)’ (Feb/Mar 2015 update of larger review which it links to – also well worth reading and referring to). See SGR web-page (SGR = Scientists for Global Responsibility): <http://www.sgr.org.uk/resources/shale-gas-and-fracking-examining-evidence-febmar-2015>

7. In response to your statement that you see fracking as a potential way of reducing emissions by reducing our use of coal as happened in the US:

This is extremely unlikely for a number of reasons thoroughly covered in Harrison et al. above.

I’ll summarize a few here (but likely to be better expressed in the Harrison et al review):

1. The surge of fracking for shale gas in the US resulted in coal mined in the US for US use being exported so to be burnt elsewhere in the world. Thus on a global scale emissions were not decreased but if anything increased as we now had both being burnt. This displaced US coal reduced world coal prices resulting in more coal being burnt in UK power stations and elsewhere than likely to be otherwise, as it was made more plentiful and cheaper than otherwise. (Fortunately more recently the global coal market is facing threats). In short – the extraction of a new source of fossil fuels adds to global emissions as any extracted fossil fuels such as coal get burnt elsewhere.

3. US emissions with fracked gas are likely to be higher than expected from simpler calculations (i.e. from conventional gas having about half the emissions of coal), because fracking for gas (i.e. ‘unconventional gas’) in the US has been shown to have high fugitive methane emissions due to poor standards there.

4. Only 20% of existing fossil fuel reserves can be burnt for us to keep under the internationally agreed +2degrees temperature rise, so to add another new fossil fuel source to the total reserves is going in the wrong direction.

5. The starting up and locking in of a new fossil fuel industry in the UK detracts government focus from the necessity of demand reduction and clean green renewables, and similarly threatens investment confidence in the latter.

8. Now a further comment on your promise I’ve numbered ‘3’: Although your intention here sounds good, the Conservative direction of travel in the coalition government has been:

1. to cut back on staff in the Environment Agency and HSE so that any regulations would be self-monitored by the industry in practice (hardly inspiring our confidence).

2. For deregulation to free up the industry. There was a recent a battle over fracking in the Infrastructure Bill – and it was clear which side the Conservatives were on.

3. To support TTIP, CETA and the ISDS – which would give power to the fracking industry to challenge any government (national and local) and any democratic influence if it tries to limit fracking.

Again read Harrison et al. on regulatory control of fracking.

9. I hope that after reading the above points and having a look at the references, including the two I list below – **especially the recent report by Medact**, you will reassess your support of fracking. I look forward to your response, especially on the impact on health – from the viewpoint of a medical doctor.

Henry Adams, 21apr15

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Learn about fracking: www.dragonfly1.plus.com/FRACKING.html

Hidden dangers for us all in TTIP and CETA: www.bit.ly/STOP-TTIP-South-Lakes <<<<

And how you can try and remove them: www.bit.ly/FTAemailMP <<<<

Some other useful references on fracking and health:

Medact (“Health professionals for a *safer, fairer & better* world”) has very recently produced a report which I have yet to find time to read - except for the summary on the web-page which links to it – which I **strongly recommend you read**. The Medact report has been recommended to me on this subject. ‘[Health & Fracking: the impacts & opportunity costs](http://www.medact.org/news/new-report-health-fracking-the-impacts-opportunity-costs/)’ March 30th, 2015. “Health professionals call for an immediate moratorium on fracking due to serious risks to public health”

<http://www.medact.org/news/new-report-health-fracking-the-impacts-opportunity-costs/>

The Guardian’s [John Vidal 19jan15 on the New York State’s fracking ban, and comparing the NYS decision to UK government's policy and assessment - which appears to be deaf and blind to such evidence.](http://www.theguardian.com/environment/blog/2015/jan/19/what-the-uk-could-learn-from-new-yorks-fracking-ban)

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