

Cheshire West & Chester Council
Nicholas Street
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CH1 2NP

cc. Individual members of Cheshire West & Chester County Council + Fiona Reynolds (Director of Public Health at Cheshire West & Chester County Council) + Alison Knight (Head of Places Strategy) + Filip Prevc (Policy Manager) + Georgina Patel (Senior Manager Energy & Carbon Reduction) + Tracey Brown (Democracy and Elections Officer) + Rod Brookfield (Senior Planner Monitoring & Enforcement)

Dear Councillor,

Re: Hydraulic Fracking in Cheshire West & Chester

My name is David McCoy and I am a public health doctor. In the course of my professional life, I have worked in a range of clinical and public health settings as both an academic and practitioner. I am currently a senior academic at the Centre for Primary Care and Public Health in Queen Mary University London and the Director of Medact, a UK-based public health charity. I recently worked as Director of Public Health in a Primary Care Trust in London and as head of public health intelligence in North West London. I am a Fellow of the Faculty of Public Health and have a doctorate from the London School of Hygiene and Tropical Medicine, University of London.

I am writing in my capacity as the Director of Medact, though I draw on many years of experience as a public health academic and scientist.

I am writing in relation to the consultation you are currently undertaking on the issue of hydraulic fracturing for unconventional shale gas (fracking) in Cheshire. It is my view that fracking should be prohibited in the UK because it poses significant risks to the health and well-being of local residents and the wider general population. Furthermore, the arguments that fracking provides a source of clean energy do not stack up against the evidence; and there are also serious questions as to whether fracking would provide sustainable social and economic benefits to the local population.

It is important to note that Medact has absolutely no vested interest in *any* decision taken on fracking in Cheshire or elsewhere. Medact only declares a public interest commitment to public health, sound evidence, social justice and inter-generational fairness.

Medact is a registered public health charity with nearly a thousand members, the majority of whom are public health specialists and clinicians with a wide range of expertise and knowledge.

We will soon be publishing a detailed expert position paper on the health effects of fracking in the UK which will examine the evidence on the safety and impact of fracking on health, as well as its wider social, ecological and economic impacts including its relationship to greenhouse gas emissions and global warming.

This is being written because of the lack of an authoritative and comprehensive public health assessment of fracking. In this regard, it is important to note that a review of the potential health impacts of exposures to chemical and radioactive pollutants from shale gas extraction that was produced by Public Health England last year was inadequate, incomplete and now out of date. It also arrived at an erroneous and unsubstantiated conclusion based even on the limited scope of its own analysis.

Local and immediate health impacts

Fracking is an inherently risky activity. Some degree of environmental pollution (air as well as ground and surface water) *will* occur at each stage of the shale gas extraction process. Air pollutants include volatile organic compounds, tropospheric ozone, and diesel particulate matter. Pollutants in ground and surface water include benzene, hydrocarbons, heavy metals and naturally occurring radioactive material. Occupational hazards at the well pad include airborne silica exposure. These various pollutants include known carcinogens, mutagens, teratogens, respiratory irritants and neurological, endocrine and haematological toxins.

While some pollutants are known to have toxic and harmful properties, many have not been adequately studied and others have not been studied at all. Furthermore, our knowledge about the potential health effects of simultaneous exposure to multiple hazards is incomplete. For these reasons, the *precise* level of risk to human health from fracking-related pollutants cannot be fully known.

Furthermore, we recognize that exposure may translate into a level of risk that may be considered minimal or insignificant. After all, all industrial activities contain some degree of risk to human health. This while fracking is inherently risky, it is important not to exaggerate the risk to human health: hazards may be contained and minimised, and health can be protected by using technology and employing safe practices.

Hazards also only become health risks if humans are exposed to them. A critical point to note is that the extent of human exposure to the various hazards and the subsequent risk to human health is indeterminate and ultimately depends on multiple factors including the proximity, size and demographic characteristics of local communities to fracking wells; local geological factors; and the number, scale and concentration of fracking wells (both vertical and horizontal).

The operating practices of fracking companies are also important in determining the short and long-term structural integrity of wells; the composition of fracking fluid; and the frequency of surface spills and leakage of hydraulic fracturing and natural contaminants from storage containers and during transportation. For this reason, confidence in the regulatory policies and systems governing fracking activity is of vital importance.

Notwithstanding these various causes of uncertainty, experience from elsewhere, particularly the United States, shows a growing body of evidence that exposure to toxins such as benzene, emissions of particulate matter and the generation of smog (in particular) is a substantial and serious health issue.

A growing body of data shows that fracking will *also* impact negatively on human health through the effects of noise pollution, heavy traffic, spoilage of the natural environment, and social and economic disruption (from the temporary influx of large numbers of short-term workers, often from outside the local area. While evidence exists about the many health benefits associated with green spaces, the psychological and mental health impacts of fracking are often ignored or under-reported in health research. Similarly, although the negative impact of temporary 'boomtown effects' on community cohesion, health and wellbeing is recognised, it is rarely measured.

Although the precise level of risk will depend on the various factors mentioned earlier, in my view, the risk of fracking in Cheshire will be particularly high because of the anticipated

intensity of industrialised fracking and the population dense characteristics of the county. Local geological characteristics and the presence of agricultural activity add additional reasons for concern.

The regulatory context of fracking

In our view, the issues raised above provide sufficient and justifiable reason for Cheshire West and Chester to prohibit unconventional shale gas extraction.

But on top of this, we believe that there are significant gaps and deficiencies in the current system of regulation that mean that the risks associated with fracking will not be adequately minimised. We concur with a recent conclusion of the Chartered Institute of Environmental Health (CIEH) that a *“combination of weak regulation, diminishing resources within regulatory bodies, inexperience of industry and regulators, lack of an appropriate monitoring framework, poor industry compliance and potential conflicts of interests within the planning regime is very disquieting”*.

Put more simply, we do not have anything close to the combination of laws, policies and systems that would be required to ensure reasonable public protection and safety.

For some reason, the current government has adopted an aggressive determination to rapidly expand fracking in the UK and has sought to weaken rather than strengthen public safeguards. This has included rejecting the suggestion that fracking companies must secure a bond to insure themselves from any future liability (leaving the bulk of risk associated with fracking in the hands of local communities and public authorities and not with commercial companies); and inserting clauses into the Infrastructure Bill that would weaken regulation and extend the rights of companies to conduct fracking without the consent of landowners.

It is important that Cheshire West and Chester Council take note of the fact that New York state in the United States, as well as several countries in Europe, have adopted contrary positions to that of the current UK government. New York state has recently prohibited fracking (after first implementing a moratorium) on the grounds that it is too great a public health risk.

The relationship between fracking and climate change

There is a growing recognition that global warming poses major threats to global health and development through various direct and indirect pathways. These include the effects of climate change and extreme weather events, as well as major disruptions to agriculture, biodiversity and water security. The potential for catastrophic effects has been recognised by the Intergovernmental Panel on Climate Change and numerous international and national scientific bodies. The international public health community are increasingly labelling climate change as a 'global public health emergency'.

Regrettably, vast amounts of money have been used to undermine the science of climate change leading to considerable misinformation, misunderstanding and denial. It is important to make this point; and reiterate the fact that Medact has no vested interest in either the fossil fuel or renewable energy industries.

The scientific message is simple and clear. We need to institute a rapid, radical and transformative shift towards renewable energy and environmental protection. While climate change is a global problem that will require global solutions, there is no doubt about the importance of local action and bottom-up leadership. Cheshire West and Chester Council, and indeed every other local government authority, should be considering climate change and ecological sustainability in all its policies and operations.

When it comes to fracking, the argument that unconventional shale gas provides a cleaner and cheaper source of energy cannot be substantiated. Unconventional shale gas is in and of itself a fossil fuel. Furthermore, due to the effect of 'fugitive emissions (primarily of methane), there are real and valid concerns about shale gas having an overall global warming effect *that is comparable to coal*. There is furthermore little evidence to suggest that large public and private investments in fracking would actually enable or hasten the vital shift towards renewable energy and major energy conservation.

In conclusion

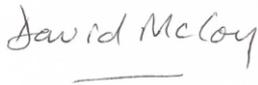
Medact is currently in the process of completing a detailed public health assessment of fracking. The report is being pulled together by an inter-disciplinary group of doctors, climatologists, environmental scientists, engineers, geologists and energy policy experts. We are consulting various experts from across the world and expect to have the report published in March.

But the case that I have just outlined already makes it clear that the only responsible course of action would be to prohibit fracking outright. At the very least, Cheshire West and Chester Council should call for a moratorium on fracking until a comprehensive, public and truly independent social, environmental, economic and health impact assessment of full-scale fracking is conducted.

This is clearly a short letter that goes to the point. However, I would be happy to provide more detailed responses to any specific questions that you may have.

Many thanks.

Yours sincerely,



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Director of Medact

David McCoy is a public health physician. He has worked across a range of public health issues as both an academic and practitioner, and has a doctorate from the London School of Hygiene and Tropical Medicine. He is a senior clinical lecturer in global health at the Centre for Primary Care and Public Health at Queen Mary University London and the Director of Medact. Recently he has worked as a Director of Public Health in London. Previously, he worked as a clinician for six years (first in the UK and then in a rural government hospital in South Africa). He has also worked as a health policy researcher at the Child Health Unit of the University of Cape Town, and as the Director of Research and Technical Support for the Health Systems Trust, an NGO established to specifically to support the transformation and development of South Africa's health care system.