



Frack Free Darwin – Hearing Transcript

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Darwin Convention Centre, Darwin

Speakers: Belinda Quinlivian, Chris Naden and Melissa Burey

Hon. Justice

Rachel Pepper: Welcome to the later afternoon session of the presentation to the inquiry. If you could please state your names and who you're appearing for today.
Thank you.

Chris Naden: Sure, Chris Naden. Frack Free Darwin.

Hon. Justice

Rachel Pepper: Thank you.

Belinda Quinlivian: Belinda Quinlivian. Frack Free Darwin.

Hon. Justice

Rachel Pepper: Thank you.

Melissa Burey: Melissa Burey. Frack Free Darwin.

Hon. Justice

Rachel Pepper: Thank you very much. When you're ready, thank you.

Belinda Quinlivian: Thank you. Thank you, Justice Pepper and members of the inquiry. So as a group, Frack Free Darwin, banded together a little over a year ago, we have a core group of over 200 members and we meet at fortnightly to discuss issues regarding the potential for fracking industry to go ahead in the Northern Territory. We also run community stalls where we engage with the public and we hear their concerns and have conversations, and help to educate them about fracking in the territory. So I'd just like to raise some of the concerns that present to us on these stalls and in our meetings.

Hon. Justice

Rachel Pepper: Thank you.

Belinda Quinlivian: So firstly, the biggest concern is with regard to environmental risks. I believe that this has been quite well covered so I'll move on from and come back to there. There's also community concern about confusion resulting from misleading information. Things like "we've been fracking for years" and confusion between what are the different types of gas mining up here.

I attended the gas industry seminars and I found that they presented a perfect world case scenario regarding well construction and the process of



fracking. I've also found there's also other evidence to suggest that well integrity failure is a very real and expected, and as wells age, the probability of well integrity failure goes up. There's also historical evidence in the NT and Australia wide to suggest that as problems arise in gas mining companies, the probability of them disappearing also goes up. Which leads back to environmental risks and although there are risks involved with the construction and production phase of the gas industry, the real concern is the long-term environmental impacts with regards to 50, 100 years down the track, what's happening to these wells.

I'd like to just refer to the background and issues paper now, that you gloriously put together. On page 15, the risk themes here, and this came up yesterday in the community consultation which I was a part of, and I think that went very well, thank you. In this table there are nine risk headings there, risk themes. Underneath those, there are 66 boxes identifying risks and other issues, some of which obviously overlap. I've read through all these risks and issues, and it became apparent to me that of all of these risks, only one and a third of these risks apply to the gas industry themselves. The rest of the risks are held by the public. So the one and a third risks that I found refer to the gas industry is under the theme of regulatory framework, the value of compliance and enforcement. There are three sentences there. The last one stating that there maybe a risk that the cost of complying with the regulatory framework is too high for the industry and the industry becomes uneconomic.

The other one under the heading of complexity, there maybe a risk that the regulatory framework is needlessly complex. This could refer to by the gas industry and the community. So I think it's fair to say that when weighing up the risk analysis and the benefits of this industry, that there is an alarming gap between those who hold the risks and those who stand to benefit from the gains of this industry happening in the NT.

Also on page 9 of this background and issues paper, given that the environmental risks are one of the main community concerns, in particular water contamination. It says here twice on this page that BTEX additives are banned in the NT, which is great but then there is historical evidence in the NT to suggest that bans aren't necessarily enforced. If you had any stage, take a trip out to the hospital at Darwin, there's a smoking ban. I was there last week, and saw that there's people sitting under the banned smoking sign, smoking away. So if we're unable to enforce a ban in the city of Darwin, such a simple small area, then how is that going to take effect on the grand scale that we're looking at in the NT.

Also with regards to ... Actually I'll hand it over to one of my co-speakers, only got a short time.

Melissa Burey: I'd like to speak about a couple of things. Firstly, just on the issue of social licence in our capacity as people within Frack Free Darwin who are concerned with providing information to the public and encouraging the public to educate themselves by reading widely, reading scientific reports,



and educating themselves through reputable sources rather than listening to us or the gas companies but to actually reading widely and coming up with their own conclusions based on good information. We have, as Belinda mentioned, spent some time at anti-fracking stalls, doing just that. I just wanted to make reference to a claim that was made by one of the presenters this week in Katherine that there are many people who are pro-fracking and are too frightened to speak up for various reasons. I just wanted to point out that there are many residents that I have come across who work for government, here in Darwin, who are opposed to fracking but are afraid to speak up because they're afraid of retribution from their employer.

At a recent rally in the city, I had two government employees, that I was aware of their position, on my list of supporters to ring. Both of them expressed the desire to attend but were concerned about being seen to be openly opposing something that the government was promoting. One even questioned if she was allowed to do so in her lunch break as a public employee. So there is that concern in the community.

Also, several members of the public who work in the gas industry said they were unable to put a sticker on their car or hang a sign on their gate because they worked in the industry, but expressed their strong support for the ban on fracking and were prepared to sign a petition to that effect because it was a quiet way of expressing their opposition to fracking.

Another person that I met at one of our stalls was a young man visiting from Queensland who actually worked on frack wells. He was employed by a gas company and was directly involved in the drilling. He approached our stall and told us about his involvement in the fracking industry and said he was unable to sign the petition because he didn't feel comfortable doing so, but strongly supported us in what we're doing because in his words he said, "this shit is bad."

So if you look at the number of residents within Darwin who are working within the mining industry and the 40% or so who are working within government within the Northern Territory, that represents potentially a great number of people who maybe opposed to fracking in the Northern Territory, but hesitant to make that view known.

I'd like to talk also about one of the many concerns that I have about shale gas hydraulic fracturing, and that is the use of chemicals in the fracturing process, and the lack of transparency on the part of the gas companies. There seems to be considerable disparity between the components of frack fluid talked about by the gas companies when they make their presentations to the public, including at the information sessions in Darwin and Katherine last year, one of which I attended, and in their presentations to the panel today and on previous occasions. Compared to those chemicals listed as common frack fluid additives in peer-reviewed research.



To echo what Belinda said earlier, there seems to be a perfect world scenario presented to the public. This presentation of half-truths and glossing over issues which could potentially cause concern to the public, is in my opinion a real issue that goes to transparency and full disclosure by the gas companies to the public, who have a vested interest in whether this goes ahead in the Northern Territory.

I'd like to, if you would permit me, to have a look at a report that I have here put together by three scientist and engineers called "Environmental Public Health Dimensions of Shale and Tight Gas Development." This is an American report but it has far reaching implications for us here as we are also contemplating shale gas extraction here in the Territory. It says shale gas development uses fracturing fluid that contain organic and inorganic chemicals known to be health damaging. Fracturing fluids can move through the environment and come into contact with humans in a number of ways including surface leaks, spills, releases from holding tanks, poor well construction, leaks and accidents during transportation of fluids, flow back and produce water to and from the well pad, and run of during blowouts, storms, and flooding events. Further, the mixing of these compounds under conditions of high pressure may synergistically create additional potentially toxic compounds. Compounds found in these mixtures may pose risks to the environment and to public health through numerous environmental pathways including water, air, and soil.

It goes on to say that because of the limited information that is available, as I've talked about, about the chemicals used in frack fluids. Researchers have sought to acquire more information on the chemical makeup of fracturing fluids through other means. In this instance, the Colborn et al., used material safety data sheets. And doing so, identified 353 of 632 chemicals contained in 944 products used for natural gas operations in Colorado. They found that at certain concentrations or doses, more than 75% of the chemicals they identified are known to negatively impact the skin, eyes, and other sensory organs. As well as the respiratory system, the gastrointestinal system, and the liver. They also found that 52% of the chemicals have the potential to negatively affect the nervous system. And 37% are candidate EDC's or Endocrine Disruptive Chemicals. I'm sure you all know what they are. Yes.

So this study by Kassotis et al., that was also referred to indicated that EDC's are a potential health concern in natural gas operations and made the suggestion that chemicals used in the process should be disclosed, and should be screened for EDC activity.

So while these serve BTEX chemicals is banned in Northern Territory as discussed a moment ago, we need the gas companies to be transparent about the chemicals that they are intending to use. What are the names of those chemicals? What are their effects? How are they going to keep us safe from them? Then, what are the gas companies going to do with the thousands of tonnes of frack fluid waste containing those chemicals, as well as radioactive material.



There is talk of re-injection of the frack fluid into all the aquifers here in the Territory. Who oversees that? Who makes sure that that is done correctly and safely? What regulations are in place to ensure it is done correctly and safely? What happens when mistakes are made? Like accidentally re injecting into a clean aquifer as happened in California where fracking waste chemicals were being disposed of into drinking water. How do we ensure that that never happens here and if it does happen, what is our recourse? How can we fix it? Can that water be rehabilitated? I think it's fair to say that it's widely accepted to say that once water, once contaminated with frack fluid cannot be rehabilitated.

And then of course, there's the issue of earthquakes caused by re injecting these fluids into empty aquifers. Through wide reading of scientific reports and reports put forward by bodies such as CSIRO or other reputable bodies. It seems to me that there are just too many unknowns in this industry. There are too many risks that have not been sufficiently looked at or dealt with. The gas companies seem to be in no hurry to adequately answer the questions that are being posed of them in their responsibility. I question why? I question why we are not being given the full story about what this process involves, and what safety measures are being put in place to ensure that the risks are very real. Don't be a fruit as I have elsewhere. Thank you.

Chris Naden:

I've got a very hard act to follow that. So I wanna touch a bit about with both ladies talked about with the paper we're seeing at the stall. We've been doing that for about a year as expressed. And also about, I've got a tourism business so I actually get to meet lots of people on board my boat. Quite a few thousand people a year. A lot of those happen to be the Grey Nomads who travel up through Santa, through Queensland, through outback New South Wales. When I'm out in the harbour, I get talking about impacts here, you can actually see impacts in Conoco Phillips and we get talking about gas and et cetera. A lot of them talk about coming through certain areas and seeing the Outback Queensland, seeing what they're driving through, the gas fields and how they find that terrible. And then when I explain that we are potentially gonna have over 80% of the Territory under fracking licence, they are horrified to think that this Territory which tourism is such a great big part to the NT is gonna potentially sell itself down the drain and end up potentially as an industrial wasteland.

So my worry with fracking in part from the environmental aspects which I think are rolling in huge, from a tourism point of view and agriculture point of view, is losing jobs. That's one thing about saying right this new unsure gas would provide lots of jobs. Sure, maybe. May provide lots of fly in, fly out workers, but you also lose a hell of a lot of local workers. There's been studies out of Outback Queens and CSG fields, where for every 10 jobs that are created in CSG field, in the fracking, there was up to 18 in agriculture. So yes, you may get jobs here but at what cost?

The other thing I wanna talk about is much of whether you're aware of the impacts which is a massive, just over here a big gas plant. Now, bear that was talked about four or so years ago, there was a huge rush on about jobs,



economy, et cetera, all for local businesses, local people. I'm sure if you did a survey around down, around the NT now, people's opinion on impacts, how that's affected the local economy and local social scene, a lot of people don't like it.

What's also happened with a lot of fly in, fly out workers, like it's up to 7000. A lot of young blokes really cashed up and also had a big increase of bikies coming in at the same time 'cause people up here earning a lot of money. I don't know if it's purely coincidental, maybe, but the increase in so called, "ice" or social problems seems to have increased when lots of money comes around. So one of the things to be worried about also is if this goes ahead in the big time, you might have hundreds, thousands of workers in remote and that potential problem may be transferred out into the rural area away from police, away from good support. That's another thing I'd be worried about.

Also be talking about the public's opinion of politicians when we've changed government. We've had politicians seem to end up in particularly good jobs with the gas industry. Paul Henderson ended up with a good job on INPEX, which is not fracking, but there's this feeling that we don't necessarily trust politicians. We don't trust that they're looking after the general public, in our best interests. A moot point is the harbour here is being leased, I'm not sure whether you know, it's a company called Landbridge, for 99 years. I didn't realise until recently but Landbridge is quite a big player in the Queensland coals and gas industry which has come as a bit of a shock to me too so I was pretty disappointed about that.

Belinda Quinlivian: Reinforces.

Chris Naden: Reinforces, I don't necessarily trust our leaders anymore too.

Belinda Quinlivian: Yeah, just one more point that I'd like to make is another thing that we hear regularly on the stalls is like I said, it's not just locals but it's people from interstate. Jubilant Victorians who are living in a banned ... Fracking is banned in Victoria. Also people from overseas, backpackers who come from places where it's banned or not banned. Another question is, it's banned in so many places, why are we considering it here? I guess my question is that I hope that the reasons why it's banned in other jurisdictions in Australia and worldwide, that that is looked at within this inquiry 'cause there's plenty of scientific evidence out there. Did you wanna add anything?

Melissa Burey: No, I don't really think so.

Belinda Quinlivian: Okay. Thank you.

Hon. Justice

Rachel Pepper: You've referred repeatedly to scientific evidence, other evidence, for example, other evidence to suggest that wells have failed, scientific evidence in relation to various environmental impacts. Will you be furnishing the inquiry with that evidence in due course?

Belinda Quinlivian: Yes. Yes, we will be submitting that [inaudible 00:23:02].



Hon. Justice

Rachel Pepper: Thank you. Yes, Doctor Jones.

Dr David Jones: You mentioned this issue of disclosure of compositions of frack fluids. This morning we had a presentation from Origin and they said they actually disclosed all this information to the authorities and they put up a slide here it showed a lot of constituents and they said that was available on their website. Are you aware of the availability of that information?

Belinda Quinlivan: I didn't see their presentation this morning so I can't really comment on what they actually presented.

Dr David Jones: That was news to us, by the way, so I'm just asking you.

Belinda Quinlivan: Yeah. Overwhelmingly, even here in the background and issues paper, the information that's presented to the public ordinarily is information that's very general. They are not actually providing the names of the particular chemicals that are being used, they just simply refer to a gelling agent, a gel breaker such as ammonium persulfate. They also make reference ... I'm sorry, a bactericide or disinfectant, they also make reference to its common applications which to my mind is quite misleading because it gives the impression that these chemicals are benign and have no health danger or environmental danger because they are used in domestic applications with safety. So what I would like to see is, and again I can't comment on what was done this morning as I didn't see it, but what I would like to see is the names of every chemical that is planned to be used or has been used in this application elsewhere so that we know exactly what it is that we are dealing with. We need to know the risks associated to human health and environmental health posed by those particular chemicals. So full disclosure, not just generalised sanitised perspective.

Chris Naden: I can speak personally but I don't necessarily trust that they'll tell you exactly what's in there. I struggle to believe that they'd tell you exactly what all their ingredients are.

Hon. Justice

Rachel Pepper: What if they're made to, by law?

Chris Naden: Is there anywhere in the world that they're made to by law?

Hon. Justice

Rachel Pepper: Absolutely.

Chris Naden: Is there? Okay. If that is the case, if they're made to by law and they've been found to have lied and they're repercussions than I will believe that if that comes from the government, if that is law, whereabouts do they do that in the moment?

Hon. Justice

Rachel Pepper: It's various countries overseas including Canada.

Chris Naden:

Is it. Okay.

Hon. Justice



- Rachel Pepper: In the United States, some states as well. Yes, Professor Hart.
- Prof. Barry Hart: Just trying to get the scope of your organisation, Frack Free Darwin. So if Darwin was made frack free, you're okay with that?
- Melissa Burey: No.
- Prof. Barry Hart: Don't have to go to all those meetings then.
- Melissa Burey: No, we understand that we're no under threat here in Darwin, certainly, I'm under the impression that we're-
- Prof. Barry Hart: I think so, so are we.
- Melissa Burey: It just came up for our desire to support the people who are living in other areas. Also, people live in Darwin because of the natural environment. I mean, if we wanted to live in a city that has all of the bells and whistles then we'd move down south but we live here because of that reason. We have a deep connection to the environment here. Chris is a fisherman and Melissa goes bush with her family and we all visit the wonderful remote community festivals that are held in the very areas that are under threat. We thought that because of the sparse population that's out there, we needed to provide support for the people out there so that they ... even though that they are isolated that they have the support of us behind them.
- Prof. Barry Hart: Can I just follow that up? Totally different actually. Your comments about people being frightened, to speak up, I guess I'd say as far as we're concerned, we probably, I probably accept that that is occurring, but ... and I'm worried about it. I'm not that worried about it because we're concerned with the evidence. I'm just thinking, yeah, there are people who aren't speaking up, but they're probably going to say exactly the same things as many others. We're not counting numbers, we're counting evidence. So, I think you can be worried about it, of course from your perspective, but I don't think going to really impact on our inquiry.
- Melissa Burey: I guess my purpose for making reference to that was to create a balance to claims made by the person who spoke, from Katherine, a few days ago about there being fear on the side of people who are pro-fracking and not wanting to speak out. I just wanted to illustrate the point that there are also people who are anti-fracking, who are opposed to it, who are frightened to speak out. So there is a balance there.
- Hon. Justice
Rachel Pepper: Ms Coram
- Chris Naden: Two of my friends ... I have two public service friends and they're very anti-fracking but they worry that it will affect their jobs.
- Hon. Justice
Rachel Pepper: Thank you. Ms Coram.



Ms Jane Coram: As we've heard in the course of our consultations, there's a real lack of trust in industry and in government. You made the comment that you've been encouraging people to educate themselves by reading reputable sources, just wondering, where do you regard those lying, the reputable sources.

Melissa Burey: We won't find them.

Ms Jane Coram: What would you regard as reputable sources?

Melissa Burey: Sources that are peer-reviewed. Sources that are ... It can be difficult for the lay person to sift through them. Scientific reports as well, some primary research. Reports that are put forward by bodies, such as universities and researchers within universities and that kind of thing.

Belinda Quinlivan: If I could just add to that. We also, on our stall, have maps and charts that come directly from the NT government so that's the basis for our information.

Chris Naden: All our maps on the stall in regards to where licences are, come directly from NTG.

Hon. Justice

Rachel Pepper: Thank you. I think there's final question here from Professor Priestly.

Prof. Brian Priestly: I made the point to an earlier submission today, that the purpose of presenting the information on chemicals and fracking fluids in that table was not the intent to trivialise the health effects. It was simply to demonstrate that there are other types of uses of those chemicals which we're familiar with. I would point out that the potential health effects of those chemicals will be, very much, a subject of the inquiry. I've already started to collate a large amount of literature. The report that you are quoting from, I'd be interested to get more detail on because I may already have it, but if I don't, I'd certainly appreciate having that detail from you.

Belinda Quinlivan: Yes.

Hon. Justice

Rachel Pepper: I think the article that you read out, are you willing to make that available to the inquiry?

Belinda Quinlivan: The report that I'm reading now?

Hon. Justice

Rachel Pepper: Yes, that's right.

Belinda Quinlivan: Yes, absolutely.

Hon. Justice

Rachel Pepper: All right, if you could perhaps give a copy or e-mail?

Belinda Quinlivan: We're going to collate all that data and give a submission.

Hon. Justice

Rachel Pepper: All right, so that will be attached for referencing. Thank you very much, that's of use. Thank you very much for coming and presenting today.



Belinda Quinlivan: Thank you.

Melissa Burey: Thank you for the opportunity.