

In Our Element – with Linda France

Episode 5: Air

TRANSCRIPT

Linda France:

In Our Element: A poet's inquiry into climate change. Episode five: Air

[Music]

Linda France:

As we move through the elements, their energy becomes more refined. So far, we've touched the earth, listened to water and played with fire. And today we're up in the air, where there's less and less to hold onto. Air is invisible, ungraspable, but every second of our lives, our bodies are being breathed. 22,000 times every day, without even thinking about it, we take in oxygen molecules and breathe out molecules of carbon dioxide. So the plants can photosynthesize, making more oxygen for our next breath. [Music swells.]

Joshua Green:

[Singing]

Nancy Campbell:

A lot of the Greenlandic legends are quite often about breath and spirits.

Linda France:

Poet, Nancy Campbell.

Nancy Campbell:

I went back to Greenland in the summer. Though I went for many long walks across the tundra then, I was quite alone and I heard a breathing, a very distinctive breathing. And in the wilderness, I was actually completely terrified. And it took a few heartbeats before I realized that it was a whale in the fjord below me, which had risen and was breathing out. So you are very alert, I think, when you are on your own in the landscape, every sense heightened.

Linda France:

As the earth warms up and cools down the air around us moves in constantly changing currents. Humans have learnt how to harness the wind to create power and generate electricity that is renewable. We call a collection of windmills a wind farm. In the same way we have a murmuration of starlings or a charm of finches. I wonder if there might be a more surprising collective noun for windmills. What about an exhalation of windmills? The sigh of satisfaction that we found such a clean and sustainable form of energy. Or perhaps a whisper of windmills, which again, speaks of the air in our own bodies. The way words are essentially shaped breath that change the air around them. A whisper can spread like a rumour; a rumour of good news for us and the planet.

Anabel Gammidge:

Yeah. So the wind speeds' probably, I don't know, about five meters per second, six meters per second something like that. Oh, meters per second. Okay. Maybe 10 or 12 miles per hour. Does that mean more to you?

Linda France:

Yes. I can visualize that. Yeah.

Anabel Gammidge:

So it's what we call a gentle breeze.

Linda France:

My good friend Annabel Gammidge, who's been a wind engineer for over 40 years. So here we are Annabel, standing, not too far distant from a wind farm of... How many wind mills are there?

Anabel Gammidge:

Six.

Linda France:

Six windmills in

Anabel Gammidge:

Durham.

Linda France:

Durham, County Durham. Yeah. Yeah. And we've got the six. How tall are they?

Anabel Gammidge:

Those are 70 meter towers. And the blades are 35 meters long.

Linda France:

Yeah. Well they do feel like gentle giants. Being in the presence of them.

Anabel Gammidge:

I mean they're relatively small compared to the turbines that we are now putting in. They're probably about half the size in terms of the blade lengths. You can see the blades - so these are three bladed machines and as they turn, they're connected to the generator. So the rotation of the blades is making electricity essentially. And so inside the tower, you've got cables and they're going from all the turbines back to the substation there, that's where it connects into the main grid. So there'll be underground cables coming from, I don't know, where the nearest pylons are, but anyways, somewhere around there'll be a high voltage grid that we're connecting into.

Linda France:

Ah, right. It feels like we are standing here looking up. Our heads are looking up a little bit like the way that you look at a beautiful building, like a cathedral or something. And it reminds me of

the fact that our word meteorology comes from the Greek meteor, which actually means things on high, things up high.

Anabel Gammidge:

Okay.

Linda France:

So it's really making sense for me of why that should be so.

Anabel Gammidge:

Okay.

Linda France:

And so it's a real beautiful manifestation of that. We are looking up to the heavens aren't we?

Colette Bryce:

One of the things about the turbines is that the design is so beautiful. I don't know if everyone agrees with that, but I think I love seeing them in the landscape. They have this almost spectral Calvary quality.

Linda France:

I'm talking with the poet, Colette Bryce about ways of writing about the natural world and her year as poet in residence at Newcastle University's Dove Marine Laboratory back in 2012.

Colette Bryce:

I don't think of myself, particularly, as a nature poet or an eco poet or any of these current labels. I don't even perceive myself as writing very much about the natural world. But on the other hand, of course you do. You know, of course I do. I spend a lot of time out and about in the world and I think it happens in a very organic kind of way. And it comes from often close observation, leading into unexpected things happening that can be a very generative way of writing. And I found that, particularly thinking back to that residency at the Dove Marine Laboratory, I just did a lot of watching.

Linda France:

So what took you by surprise there?

Colette Bryce:

Everything. I just learned a great deal. And I learned it from shadowing some of the work that was going on conducted by certain scientists there. And one of these did involve the wind farm technology. I very much drew upon what I'd learned about the impact of wind energy on the natural world, on the animal world and also on public health and how to mitigate these effects going forward. So this was the tension, I suppose, in the whole technology that was under discussion.

Colette Bryce:

So some of that came in an imagistic kind of way to this poem.

'Turbines in January'

A thousand synonyms for wind
make up your song.
Those busy arms

may juggle any number of rumours
going around:
your *Swish*, for one—

they say it whisks the pool of sleep;
that blades cut holes
in the cloth of dreams;

that shadow-flicker
makes of the sunniest day
a speed-frame motion picture,

and panes of ice, which crystallize
on your frozen wings,
are flung when you turn

(one, it was said, had lodged
like a glass fin
in the roof of a camper van).

*

What's to be done
to keep your head in the clouds,
your whirling one-track mind,

for the wingers and losers,
raptors, plovers, gulls
batted to the ground?

What's to be done
about your foot, electric root
beneath an ocean floor

abuzz with armoured
creatures charmed
by your magnetic aura?

*

Like my brother's
distance-defying snaps,
where the London Eye will rest

like a trinket in his palm
or the Tower of Pisa
bend to the slightest pressure

of an index finger,
these turbines
could be a row of daffodils

bordering a lawn, signalling
the spring, as I reach
my hand out

into the perspective,
pluck one like a stem,
raise it to my lips

like a child's seaside windmill
on a stick, and blow...
Its earfolds fill and spin.

Linda France:

Oh, there's two aeroplanes as well, one behind the other. Are they gliders?

Anabel Gammidge:

I think they're gliders.

Linda France:

Yeah. So they're also using the wind, and the thermals today and this beautiful day. It must be lovely to be up there.

Anabel Gammidge:

Be a good day.

Linda France:

Yeah, yeah.

Anabel Gammidge:

So when you do background noise monitoring, if you've got a lot of trees, all that sort of thing gets taken into accounts and whether the trees are coniferous or deciduous. So are the leaves there all year round, or are they only there in the summer?

Linda France:

So that's when you're monitoring about the conditions that might be acceptable or not to local inhabitants?

Anabel Gammidge:

Yes. Yeah. So a well designed site should not cause any problems with noise. What sometimes happens is when you first put the site in, everything's fine. And then the turbines start getting a bit older and some of the mechanical bits start getting a bit clunky and then we've got to make sure that everything's still all right. Similarly, the blades you've got to keep them clean, dirty blades can make a bit more noise than clean blades.

Linda France:

So what are the other problems that you have to address?

Anabel Gammidge:

So there's also what they call shadow flicker, which is when, so say the sun was a bit lower behind that turbine, if the turbine was rotated so that it was right in front of the sun, you'd get a weird shadow effect in your window every time the blade went round, the rotor went round and that's called shadow flicker. It's something you can predict quite well because it's to do with what latitude you're at, what time it is. But then on top of that, you've got, obviously, if it's not a sunny day, it's not going to happen. Or if it's not windy, it's not going to happen. But again, we can do calculations. So if this was a house here, we could work out how many hours a year might it get shadow flicker? Assuming it has a window pointing towards the turbine. We can put sensors on, that say, 'Oh, it's the right wind speed, oh, it's sunny. We're going to shut down until this moment has passed.'

Linda France:

It's such a lovely word shadow flicker.

Anabel Gammidge:

It can be very disturbing. I mean, I've witnessed it. And especially if you've got epilepsy or something like that. The other things we have to consider are other environmental issues like with birds and bats. So obviously you have heard horror stories of birds being killed by turbines and sadly, occasionally they are. But again, we do extensive studies before we decide where the turbines are going.

Anabel Gammidge:

Certainly most local birds around here won't be at risk because they know these turbines are here. So a bit like they wouldn't fly into a tree trunk, they wouldn't fly into one of these turbines, but migratory birds don't necessarily know. And if the weather's bad, so if they're coming along and the weather's so bad, they can't see them, they're at risk. And especially offshore, that can be a risk. And so we avoid migration routes. We don't want to kill birds, we really don't and we don't want to, and similarly bats again, that's another interesting one. You can be pretty sure, depending on the species that they're probably going to start flying at just before sunset or just after sunrise. So we can tell the turbines, we can stop them - if the wind conditions are right and the weather conditions are right - and wait till danger has passed, then start them up again.

Colette Bryce:

I did have a sense of joy and wonder looking at them, these structures, which I haven't lost. Last week, I went on holiday and I rented a house in Donegal, up on a hill. And nowhere in the description had they mentioned that there was a wind farm behind the house, which some people might not like, but I was delighted to find it. I was again, filled with absolute awe and I was able to go up and be very close to these turbines. You could approach on foot. And the immensity of them, the scale is wondrous for the tiny human being in their shadow. I have still got this prose piece that I wrote, which has all different kinds of images. It's all stilt walkers in the sea and kind of sci-fi mono pets, things like that. None of which ended up in the poem, but in a way I wrote my way in, through all of this image making, and then find my way into the images that have ended up in the poem.

Colette Bryce:

And I can see now that they are very much about the science and that when you start learning, especially back at that point, because it's obviously a technology that's developed a lot in the years since, but back then, if you looked up wind farm technology, you would be sort of bombarded with an awful lot of protest sites. People blogging about their objections to ones near them. People talking about the public health issues that they perceived. People worried about the bird life and these sites, whether onshore or offshore. So that was slightly overwhelming. Whereas the really beneficial aspect of this technology, which is huge, in terms of where we find ourselves today, was less to the forefront on the online world.

Linda France:

I think it's true, isn't it, that last year it was a record year in terms of the quantity of electricity that was generated by wind power and renewables generally in the UK.

Anabel Gammidge:

But in Europe as well actually.

Linda France:

Didn't they say on Boxing Day when Storm Bella happened, it actually provided all the electricity in the UK?

Anabel Gammidge:

For a few hours. Yeah.

Linda France:

That's quite remarkable.

Anabel Gammidge:

That's amazing. It's amazing. Yeah. Given, when we started. I knew from quite an early age that I wanted to be involved in something to do with sustainability and in the late seventies, early eighties, that was a bit wishy washy. We didn't really know what it meant. So I was really lucky to get a job with this little cooperative in Hesham called Northumbrian Energy Workshop. And we installed mainly wind and hydro, some solar, mainly to houses that were off grid. And there were lots of houses in Northumberland at that point that weren't on the grid. We always dreamt

that one day we wouldn't be seen as complete freaks for wanting to generate electricity from wind, but I'm not in the business of selling more electricity. I'm in the business of making sure that as much electricity as possible comes from a renewable source, but I would encourage everyone to use less electricity. Definitely.

Linda France:

Yeah. Well, I suppose that comes from those early ideals as well. Doesn't it? That you weren't...

Anabel Gammidge:

I'm still doing it.

Linda France:

Exactly. Exactly.

Linda France:

You create such beautiful vivid word and sound pictures of the offshore wind farm. And I don't know whether it's too far-fetched, but I have this sort of sense that it's kind of acknowledging something about our dependence on its power, how much we need electricity to sustain the lifestyles to which we've become accustomed.

Colette Bryce:

I think definitely that and the problem of human agency really in all of this. In a way the speaker in this poem becomes a giant and plucks the tiny daffodil sized windmill, which is both an innocent gesture, but also kind of frightening gesture. So I think there's a lot of that going on about where do we stand. Because we are both, of course, the problem and any attempt at solutions - we embody both, I suppose, in our very problematic relationship with the natural world. The difficulty is being overwhelmed, isn't it? And especially with the task that you are currently undertaking of focusing all of your attention to the climate emergency. To be a poet in such a context and to find that still center where one can really think through to the poem can be increasingly difficult, but not impossible. And we must always believe in that possibility and in the role of poetry within all of our responses to these times.

Linda France:

In Our Element is presented by me, Linda France. It's a Sonderbug Production with New Writing North in association with Newcastle University, and is supported by the Audio Content Fund and Arts Council England.

[Music swells]

Linda France:

So to end our investigation of air, I'll leave you with my poem, 'Mooring'.

Because there's nothing else

to be done, I step outside

breathe into the horizon.

Because today there's so little
to hold onto, I count
the pylons crossing my eye line

trace the wires between them,
patchworked fields and trees,
white windmills on the farthest rise.

Because after all I'm here,
I breathe in the wide expanse
feel my body realign

tissue and bone, all the precious
nothing, everything I can set my heart
on, the back and forth of air

a rope braided between being.