

Jon Spooner ([00:02](#)):

Hello and welcome to Live from the Space Shed, a podcast all about space and science hosted by me, Jon Spooner and me.

Mini Jon ([00:10](#)):

You mean me.

Jon Spooner ([00:12](#)):

Sorry. Yeah, I mean you.

Mini Jon ([00:14](#)):

Mini Jon!

Jon Spooner ([00:14](#)):

Mini Jon! Long story short a few years ago, I accidentally set up my own space agency based out of the shed at the bottom of my garden. Turns out if you go around telling people you're the director of human space flight operations for the Unlimited Space Agency, wearing an orange space suit, more people than you might think want to play along. And now the British astronaut, Tim Peake is our patron and he took me with him to space.

Mini Jon ([00:37](#)):

He took *me* with him to space.

Jon Spooner ([00:40](#)):

Yeah yeah alright, he took you with him to space. So Mini Jon became UNSA's first astronaut.

Mini Jon ([00:47](#)):

Woo hoo!

Jon Spooner ([00:47](#)):

Since then we've been touring in UNSA's mobile headquarters, the Space Shed to festivals like Latitude and Blue Dot telling stories, talking to some super cool space and science people, and we've recorded our chats so you can find out about their amazing work as well.

Jon Spooner ([01:08](#)):

Last time on the podcast, we were getting ready for the global climate strike, which was immense. A really extraordinary, very moving day and then week of action involving humans, young and old from all over the planet. But if you took part in any way, thank you. We hope you're feeling inspired and uplifted to be part of such a positive community of people across the globe, working together to fight climate change. I mean, Mini Jon had so much fun that he's had to have a big lie down, which is why I'm being a bit quieter than normal - don't want to wake him up, but the work doesn't stop. So let's get straight into this episode of Live From the Space Shed for which we're back in the Faraway Forest at Latitude Festival, where I was chatting with the awesome Dr. Alice Bell, a climate activist and historian and the co-director

of a brilliant climate charity. In this chat, we cover a really big fabulous range of climate based topics and questions so let's get into it. Enjoy this episode of Live from the Space Shed with Dr. Alice Bell.

Jon Spooner ([02:34](#)):

It's alright, it's just water vapour. My name's Jon, I'm Jon Spooner. I am the director of human space flight operations here at the Unlimited Space Agency. Welcome to UNSA's HQ, the Space Shed. Come on, give it up for the Space Shed. Yeah. Okay that was our third launch attempt of the day. We haven't managed to get off the ground yet, which is, you know, disappointing. If you look at it from that sort of point of view, in terms of success. However, we have some backup plans. We're here all weekend. We've got an amazing programme of work for you. Work is play, isn't it? I mean, I'm stood here in a space suit.

Jon Spooner ([03:10](#)):

In a Space Shed! Uh, we've been doing shows. We are showing some films in the evenings early evening. Tonight we're showing Hidden Figures. Then we've got Space Shed DJs happening here into the evening. But one of my favourite things about my job, Director of Human Space Flight Operations is I get to meet some really brilliant, amazing, inspiring people and I'm really delighted this afternoon to be joined by one of those people. She is, uh, a climate activist, a climate historian, and an avid bat lover. Would you please welcome to the stage Dr. Alice Bell!

Audience ([03:43](#)):

[cheer]

Jon Spooner ([03:48](#)):

We need a chair Fido. You can tell it's the end of the first day. It's a little bit haphazard. Hi Alice.

Alice Bell ([03:55](#)):

Hi!

Alice Bell ([03:55](#)):

Take a seat. Alice. I have been very excited about you coming to join us in the Space Shed and we've been talking for a few months now, as I've got deeper into exploring the climate - you've got an interesting take on whether or not, or what words we use for climate change, crisis breakdown, emergency.

Alice Bell ([04:14](#)):

I think we should use whatever words we want to.

Jon Spooner ([04:17](#)):

Okay, cool.

Alice Bell ([04:17](#)):

Um, I mean, we should, we could say like, some people say we should say climate crisis and only climate crisis. I think that's quite a useful term. It helps us reflect on like how dangerous and scary it is. Um, but climate change is perfectly reasonable too, you can call it climate emergency climate conundrum or

whatever. I don't know. Maybe some of you have got some other ideas. I think we need more words to talk about climate change. Not, not...

Jon Spooner ([04:41](#)):

Anyone got, anyone got, yeah?

Audience member ([04:43](#)):

Climate disaster?

Jon Spooner ([04:45](#)):

Climate disaster. Are we at disaster levels yet?

Alice Bell ([04:48](#)):

Yeah.

Jon Spooner ([04:49](#)):

Yeah okay. This is cheery Saturday afternoon Latitude Festival material for everybody that was going, "Oh my God". Um, but we're going to.

Audience ([04:57](#)):

It's Friday.

Jon Spooner ([04:57](#)):

Is it Friday? Oh, it's only Friday. [audience laughs]

Alice Bell ([05:03](#)):

It is a disaster already. But the thing about climate change is that it isn't a win or lose thing. It's not like, you know, once you've hit something bad, there's no, that's it. It's just a catastrophe. Um, and it's all over. Climate change kind of happens by degree. So even though there's lots of losses, there's still so much more that we can save. So we've already got about a degree Celsius of global warming, and that is already seriously hurting lots of people and putting a lot of lives at risk, even in places that aren't affected that much by it like Britain, but there is so much more that we need to stop. And there's so much more danger that is ahead that we haven't got to yet. And so there's so much more that you know, that we can still do.

Jon Spooner ([05:48](#)):

So there is, it's both a disaster emergency and an, oh, I'm going to give you climate opportunity.

Alice Bell ([05:53](#)):

It could be an opportunity. I mean, there's lots of things that we could do to, to stop climate change that will also help lots of other things, you know, they make the air cleaner, there's all sorts of different other things that will happen with climate action that are good. A bit worried about saying it's an opportunity, cause it sounds like it's a good thing and it is undoubtedly not. Okay.

Jon Spooner ([06:09](#)):

Okay. Just before we get into how bad things are, because this hasn't always been your thing you started as, uh, your PhD was in science history?

Alice Bell ([06:18](#)):

Uh, kind of, science literature, books, books about science.

Jon Spooner ([06:22](#)):

But you've come to this. Uh, you've not always been a climate activist. And now you do work with an amazing climate charity, 10:10?

Alice Bell ([06:28](#)):

Yeah I am one of the co-directors of a climate charity called 10:10, and we do practical things that people can do to get involved in climate action themselves. So it's not just something that politicians do or big industries do, or just, you know, people who are the extreme climate activists do. It's something for everyone to be involved in, because if we're going to tackle climate change at the level we need to, it's going to change all of our lives. And so I believe it's really important that we all have a role in it so we can decide how we shape that and what we do. So that's the sort of thing we do.

Jon Spooner ([06:56](#)):

And that's what we're going to get into, who here has been worried about the climate crisis? Okay. For the podcast's sake, everybody.

Alice Bell ([07:04](#)):

There's a lot of people not putting their hands up.

Jon Spooner ([07:06](#)):

Who was it? Let's out them.

Alice Bell ([07:08](#)):

That middle row.

Jon Spooner ([07:10](#)):

They're a bit shy. It's it's, it's the Saturday - it's the Friday of the noon, uh, Latitude. Um, so we're going to get into what we can do, but you just mentioned, we've already got a degree. There's a big report out last year, the IPCC report, talking about we've got to avoid 1.5 and we're already at one degree, is that, is it really,

Alice Bell ([07:28](#)):

Roughly. There was a report out from the Met Office at the end of 2015 saying that that might be the first year that we've got a degree. They're now saying it might be not for another couple of years, but I mean, it sort of, it's very easy to think 1 degree, 1.5, 2, and that's like suddenly bang, the sky goes terribly pink or something. Um, and there's explosions everywhere. It, because it happens by degree, it

happens by bit of degree. And actually that's an average for the whole of the planet for the whole of the year. We're a bit we're, we're a bit in, in the mud already. Put it that way.

Jon Spooner ([07:57](#)):

Yeah. Okay. So is it as bad as, cause I don't know that we're all really on board with quite how bad and urgent this, this situation is. Is it as bad as you're making out?

Alice Bell ([08:07](#)):

Yes. So there's that already, we've got two degrees warming and that might not seem very much, but that is, uh, you know, an average temperature of the whole of the world for the whole of the year. And what that can already is meaning that things like last year's heat wave was much more likely to, it was much more likely to have occurred in the first place because of the global warming that we have. And we're much more likely to have those in the next few years. And it was quite nice in some parts. Um, but also we, we do know that there were higher than average, um, uh, numbers of deaths in the UK last year. And again, this is a country that's not affected by climate change very much. The heat wave in France in 2003, um, which is quite a way back now, but it was really in people's memories because tens of thousands of people died across the whole of Europe. And that was one of the reasons why, when it was really hot in France in the last few weeks, they had some amazing policies in place to try and keep everyone cool. And even then when the data comes out about, in a few months about average deaths in the summer, it would probably have been higher. So people in this country are already dying because of climate change.

Jon Spooner ([09:05](#)):

Are we all going to die?

Alice Bell ([09:07](#)):

Probably, well, we are all going to die. There's one certainty in life. We will all die. Uh, but, um, there's sort of like humanity going to go extinct. It would need to be a lot hotter than it is now. It would potentially be the kind of heat that we're on course for if we still live our lives at the level we are. And, but even then, it's sort of, it's not really the thing we know. We don't just need to be worried about everybody dying. It's a lot of us dying and a lot of our lives becoming a lot harder because of that. There's a climate scientist in Oxford. He says that he doesn't really worry about three or four degrees. What he really worries about is the social collapse that are happening around 1.5, 2, and then we'll all kill each other because climate change will impact on other things and could precipitate, you know, a global war. Um, so there's all sorts of other clever ways that humans could come up with with killing each other, yes. Sorry. I'm finding other ways to make everyone depressed. It's not just climate change, sneak in a war and famine.

Jon Spooner ([10:03](#)):

We've spoken. We've spoken about this a few times today. Um, I find it terrifying and I think as I've learned and understood much more about it, I've found it increasingly scary. And I found it really useful and important to help me deal with the way that I'm feeling by talking about it, because we don't like to, well, in particular in these sorts of settings. It's like "seriously, mate, we're here for some fun we're on holiday". Um, but actually I feel a lot better by talking about it.

Alice Bell ([10:29](#)):

I think that's true. I find that, um, when I first started working in climate change, I worked at a university and I was working across all sorts of different areas of science. And my boss said, do you like climate change? Would you like to work on climate change? And I went, I don't know if I like it, but all right, it seems important. And I had to read up a lot more. Before then I was sort of, you know, I thought of myself as someone who cared about climate change, I worried about flying too much or how much meat I ate, but I kind of avoided thinking about it too much. And then I had this job where I had to do it all day, but I was on my own mainly working. And I just used to sit under my desk with like reading new papers on sea ice melt in the Arctic just getting really, really, really depressed.

Alice Bell ([11:05](#)):

I was hiding under my desk. And then when I got the job that I'm doing now, not only do I work with a team, so I'm talking about it, but I'm doing practical work with other people. And I feel like I'm helping other people talk about it and do something. And that I don't feel so depressed about it. So I'd say, yeah, talking about it is otherwise it gets bottled up and then it'll come out in other ways. Um, and also it's not going to help us take action if we don't talk about it.

Jon Spooner ([11:28](#)):

And particularly I think in a family context, because it's something that is a big conversation in schools and it happens there, but I'm not convinced that many of us are doing it as families to support each other. Indeed. I remember growing up in the eighties, anyone else grow up in the eighties? Against the backdrop of, like it was constant, the threat of nuclear Holocaust. That's what I remember practicing in school to, if uh, "if a bomb drops hide under a desk and you'll be fine", that's like the least effective thing to do. But so, but there are really effective things that we can do.

Alice Bell ([12:01](#)):

I hope that the stuff that we're talking about, climate change isn't on that level, but they're not lying to you quite the same way.

Jon Spooner ([12:06](#)):

Yeah. But you've got um with 10:10, you've got really brilliant, beautiful practical projects that you're doing, which are about, uh, community energy sources

Alice Bell ([12:14](#)):

Yeah we've done loads on community solar. We had a whole network. I don't know. Does anyone go to a school that's got solar panels on the roof? Some people, yes. So we had a whole network of solar schools. We worked with the community in Balcombe in Sussex to build a solar farm. And they, they got so excited. They built a solar farm that powered their village and the village next door. And then they got so excited about it. And they were like, how can we power more things? And they looked at the trains that go through their village. They're like, can we power those trains by solar too? So they asked an electrical engineer who happens to live nearby and he kind of went maybe, but I wouldn't bother. And they were like, well, I think we should bother so long story short by this time, next year, you should be able to get the Waterloo to Weymouth line should be part solar powered.

Alice Bell ([12:55](#)):

And we're also working with some communities in, um, Cardiff. And we'd really like to be working - well we could be powering loads of the railways across the UK, as long as they're already electrified. We also

need the government to electrify more of them, but it could be, it could be powering trains around the world. They basically invented a technology that could run around the world. It was just a little village in Balcombe that they had the idea. And then they worked with these electrical engineers at Imperial College, and together they built a whole new technology. So that's the sort, that's like, the more gee whiz end of stuff we do. We also do stuff where we get communities together to plant trees because trees, trees are amazing. They're not going to solve all our problems. There was a big study about last week, about how, if we just plant the trees, that'll be fine.

Alice Bell ([13:33](#)):

We need to plant all the trees and do all of the other things as well. But we do need to plant trees and trees unlike a lot of other things we might do for climate change, they look, they're just, they just do so many other things as well. And they're not, I mean, you can plant trees badly. You have to be careful about it. But, um, when you plant a tree off and you get lots of other awesome things as well, like shade and it's cool. And they, they in particular, they soak up loads of water. So we've been planting trees in flood effected communities. So they can help protect themselves from the floods, by the trees soaking up the water. But they also help all of us, protect us from climate change cause the trees absorb the carbon. Um, and you can just get a professional to plant lots of trees very quickly.

Alice Bell ([14:08](#)):

But if the communities do it together, they can still do it quite quickly. But they also do all sorts of other things while they do it. Like they talk about climate change and then it gives them an opportunity to have that conversation about climate change, which otherwise we'd be a bit like I don't want to do this, but if you're planting a tree and you're doing something positive, that kind of makes it a bit easier and plant, has anyone planted a tree? Oh, I really recommend it if you haven't. It's when the people told me they were going to, I was going to plant a tree and I'd be moved by it that I was like, Oh, you old hippie shut up. But it is really moving. And you plant a tree with someone else and it's really sweet. And you feel like you're doing something for the future and it's, it's really meaningful and it is properly impactful. And so that's another sort of low-tech stuff that we did as well.

Jon Spooner ([14:48](#)):

Anyone interested by that idea that you could have your village, your road? Um, I'm interested in getting my side of the road, uh self-sufficient. How'd you do it?

Alice Bell ([14:59](#)):

What, you mean self-sufficient in terms of energy?

Jon Spooner ([15:01](#)):

Well yeah, how'd you become

Alice Bell ([15:01](#)):

That's a really good idea that you have like a whole section of your street. So, I mean, one way of taking the one way that people have done this in the past, is it like my house is going to go off grid, I'm going to do it. It doesn't really work if it's just you, you have to, you have to be infectious in everything you do, and you have to get other people to do it together. And that like sort of your block, that's quite a good number of people to do it. So it used to be relatively easy. If you could find some people to club together, you could do what this village in Sussex did and build a farm together. Or you could just do it

in roof on rooftops people. Um, when I was living in a bit of East London, I looked into be able to do it in the estate that I lived in and a couple of other ones around there and we'd work together to do it to our shared roofs.

Alice Bell ([15:38](#)):

The government's made it a lot harder to do solar. It's almost impossible to build an onshore wind turbine in England. I mean, I'd say it's there basically as effectively as banned, the government likes to tell me that they haven't banned it. And it depends on your definition of a ban. I'd say they've banned wind turbines in England.

Jon Spooner ([15:52](#)):

Why have they banned it?

Alice Bell ([15:53](#)):

And they say that they're not popular, but, um, their own statistics show that they are incredibly popular. In fact, wind turbines get the kinds of approval ratings that politicians can only dream of. So, uh, they know that they know that that's lie. And in fact, the government liked to use with pictures of wind turbine in their own internal, wind turbines in their own PR. So they know it's [inaudible] for that. Otherwise they wouldn't do that. Um, but yeah, it's, it's almost, it's very difficult at the moment to do something more radical or that, I mean, you could try and do some work on energy efficiency with your neighbors and work together to try and reduce your energy.

Alice Bell ([16:27](#)):

First step of that is just change your light bulbs, which might sound really dull, but can save a load of energy. And if you do that collectively as a whole, if, as a whole, as a whole country, Britain went to uh super energy efficient light bulbs. It's like new generation ones, not like the ones we had, uh, when I was a kid which were a bit dim, but like the new ones I already called, they save so much energy. Um, if we did it as a nation, it would save as much electricity as like several nuclear power stations. Um, and it really is worth doing as a collective group in your area.

Jon Spooner ([16:55](#)):

And it's a big part of the, uh, really positive solution that we can make to reduce our energy usage. It's something we've weirdly in the, in the West in the first world become really accustomed to, we can just turn anything on, use as much energy as we want. I think there's a misconception as well. That even by going another great thing that I like is switch your energy provider. If you haven't switched already to Ecotricity, that's a hundred percent renewable electricity, 15% frack free gas. Um, and.

Alice Bell ([17:23](#)):

Have they got you on commission?

Jon Spooner ([17:25](#)):

No, but you know, I just think why wouldn't, why wouldn't you do it?

Alice Bell ([17:28](#)):

Just for balance Good Energy, are very good as well, there's quite a few others. And that again, be infectious as that. One of the things we know in the UK is that lots of people want to change their energy supplier, but don't get round to it. And yet it's actually really easy. So what I would recommend that you do, if you haven't done it, make yourself do it, realise how easy it is and then go round and help someone else do it. And there's some companies that are really good at having like refer a friend. Bulb are one of the renewable energy groups. They they're really good on. They're really good at getting that virality, that kind of like getting people to be infectious by having a refer a friend bonus. But even if you go with them good or interesting, or any of the other ones that they, they sometimes do that, but you know, get you get everyone you know to change. And if we all collectively switch, it will really send a great message to the other energy providers as well.

Jon Spooner ([18:12](#)):

This is something, I mean, I'll be honest. I struggle with this idea of the, if I do it, then there'll be this big impact because no one else is doing it. There is,

Alice Bell ([18:20](#)):

There is research, to take the example of flying. There is research that shows that if you know someone who has given up flying, you will cut the number of flights you take. So there's a lot of people at the moment talking about pledging to go flight free for 2020, which I think is an achievement. Even for those of us who, who know that they're going to travel abroad and need to get on a plane every now and again, we might have family abroad, friends abroad. We're not saying we're necessarily, or we just really want to you know travel somewhere different. We're not saying we're going to give up flying forever. There's a lot of good things about flying as well as it being one of the most polluting things you could do, but just for a year, that's something that a lot of people could do. They'd be like in 2020, I'm not going to fly.

Alice Bell ([18:58](#)):

If you take that pledge, you might think, Oh, it's not going to do much. But if you tell your friends, they're likely to reduce, they, there is research that suggests that they are likely to reduce their flying. So you can be part of that cultural change. I mean, just look at how much things have shifted in times of plant-based eating. It wasn't that long ago that if you were vegan, you were just such a weirdo and now, you know, everyone's doing it and, or they're doing it a bit or they're cutting down. Um, and it's that cultural, that ability to create cultural change with people around you is actually really powerful.

Jon Spooner ([19:25](#)):

And that's a way of also causing direct change at a political level because you go, well, they want it, this will win us votes rather than having to storm the Houses of Parliament .

Alice Bell ([19:35](#)):

Again, because I used to be a social scientist who researched these things, so I've read all this research, there is also research on this that shows that, um, the MPs in the UK, a lot of them do actually want to do more on climate change, but they think that their constituents don't want it. So all you need to do is let them know that you want it and there'll be, they'll, and that's one of the reasons why extinction rebellion and the school strikes had been so successful in the last year, because they have shown the politicians that there are quite a large number of people in the public that want action. And the politicians are like, Oh, I can do this thing that I've kind of thought I should be doing for years. And

they're starting to, they're still too slow. They've still got a ban on onshore wind and stupid things like that.

Alice Bell ([20:12](#)):

But they are starting to take a lot more interest. I certainly noticed this as a climate campaigner, that it is much easier for us to have conversations with people in power now, or people in political power now than it was six months ago. And it is the school strikes and Extinction Rebellion have helped publicly make the point that actually a lot of the British public already thought, which is they really wanted action on climate change. So if you, if you want action on climate change, tell your MPs. They will, they, they might, I often say this to people and they're like my MP doesn't listen to me. They might pretend they're not listening to you, but it will go in. And once they've had a few of you bug them, they'll be on the phone to me saying, Oh, I've got all these constituents bugging me, alright I'm going to sign my letter to say that I would like you to lift the ban on onshore wind. And then we will get change.

Jon Spooner ([20:53](#)):

Has anyone here already written to their MP about their concerns about, so there's a handful of you don't be shy, you know, you put, yeah, go "Yeah, I have". Well done you. That's a lot of us that haven't, I wonder who would be up for taking a little pledge now, turning to the person next to them and going it's really easy. There's two websites I love to recommend: They Work For You. If you don't know who your MP is, theyworkforyou.com. That's what they do. You can go and find out who your MP is, writetothem.com will do the job of writing. You don't even have to find out their email address. You just write in your message.

Alice Bell ([21:25](#)):

I can also recommend another website, which is 1010 uk.org. One zero one zero uk.org. We have particularly have a campaign on the onshore wind ban at the moment, because it is one of the most ridiculous and easily solvable problems that we have in times of climate action in the UK. And we have already have over a hundred MPs that are signed up to our campaign. We've also got quite a few that have told us that they would like to, but they just haven't got around to it yet. So we know that our supporters have been bugging MPs up and down the country. And you could, if it's, if you're in, particularly if you like wind turbines, you could, you could do something really important. Britain was a place that invented the wind turbine and we cannot build them here. Um, you could be something historic. You could help us lift this ridiculous ban and we can start building them. So that's also just, if you want to do a specific campaign, it's 1010uk dot org.

Jon Spooner ([22:10](#)):

Let's take, let's take a 1010.org

Alice Bell ([22:13](#)):

UK.org. Sorry. That's a terrible way to say it, I know.

Jon Spooner ([22:15](#)):

Right? So show of hands. Who's going to do it? Okay. I'm going to take a picture if you don't want to be in the picture for whatever reason, some of you haven't got your hands up. That's fine. I understand. Everyone's got, you know, different passions. There you go. We'll put that up on one of our websites and you can sort of comment under it and go, yeah, I did it. And we can support each other in that way.

An unnamed member of my family, I have these conversations and I'm trying to be viral and infectious, but, um, then they turned to me and they go, Oh yeah, because the UK is pretty good on all this stuff. Even the EU is getting like comparatively, I guess what I'm getting to. And then they go, Oh, but you know, China. And that's literally the argument. Do you hear that?

Alice Bell ([22:57](#)):

Yeah. Um, so there's two things about that. One is that yes, China does have a lot of, uh, has quite high carbon emissions. There's a lot of people. So per person is not quite as though not quite so high. Also, we started this mess in Britain. So you're generally since 1992, which is when the, uh, internationally, the government agreed to start taking action on climate change probably long before several of you were born. Uh, certainly when lots of people here were very young, 19 - that we've been doing this a long time in 1992, we agreed that we'd start globally. We'd start taking action. And one of the first things that the internationally, all the governments agreed was that the richer countries would do it first. So it would be EU, which gets counted as a block in these particular conversations, the USA, Canada countries like that would take the first steps, although since then China and Brazil and a couple of other big countries are a lot richer than they were.

Alice Bell ([23:48](#)):

They're still, they still don't have quite the same, um, heritage of wealth and, you know, legacies of colonialism to be able to sit on. Still in the UN process, we think that the EU should be doing more. So when you look at people like Britain or France or America, and you say, you're doing all right, we still need to be pushing them to do, to be doing more. And there's also the argument that, you know, Britain in particular caused a lot of these problems. Um, and so arguably we have responsibility to do more and also it's easier for us to do more. The other thing to say specifically on China is that they are also pushing forward on climate action. Very, very, very fast in fact, faster than some other countries. So yes, they do burn a lot of coal, but they also make a load of solar panels. At one point they were installing one wind turbine an hour. And one of the reasons why the price of solar and wind has dropped so much in the last few years is that we've been having so much industry in countries like China doing this. So they also are playing quite a large role in climate action. Um, and so arguably a lot more than they necessarily would be expected to.

Jon Spooner ([24:51](#)):

So take responsibility, everybody don't allow, don't allow people to make the argument for us. We shouldn't be letting ourselves off the hook with that argument.

Alice Bell ([24:58](#)):

And I mean, Britain is quite small and probably shouldn't be listened to as much as it is certainly arguably.

Jon Spooner ([25:05](#)):

It won't be in the future.

Alice Bell ([25:06](#)):

But it still has a disproportionate amount of power. Like we've been. So one of the things that Britain's done that's quite good recently is we have managed to start, stop burning coal. The country that started burning coal on industrial levels. People were burning coal before Britain got in it, but we got into it

seriously. And we got, we got good at it. And we got, we found clever ways of burning a lot of coal very quickly and finding new ways to do that and reasons to do it and spread that around the world. The country that started the industrial revolution were burning coal, has regularly goes weeks without burning any for electricity. So there's very little coal is burnt in the UK now, we've really led the way in terms of going coal free. So that's, that's a good thing that we've done and it's influencing other countries. Probably people shouldn't listen to Britain arguably, but they do. So that's another reason why as British people, we should be taking action because more and more people would around the world probably shouldn't follow us, but they do. Um, so we have, I guess that's infectious power. We also have infectious power as a nation.

Jon Spooner ([26:02](#)):

You, you, you know, a lot about this stuff, don't you? Because the reason that Alice is an expert in this is because she has read all of the papers and has dedicated her life to doing this.

Alice Bell ([26:12](#)):

I didn't read all of them. One of the things about climate change is it's so, it's so complicated and there's so many different areas of expertise and not one person can be an expert in all of it. So I do know about the history of it because I got very geeky a few years ago and read all of the history books I could find on history of wind turbines. And I was talking earlier about solar power in the 1860s. Did you know that there were solar power like that long ago, Napoleon funded solar steam power, uh, back in the mid to late 19th century. And then they just stopped because coal was so cheap and wasn't until the space, we were talking about it.

Alice Bell ([26:44](#)):

Cause it was the space age that really boosted solar innovation because it was still too cheap with, um, oil and gas and coal was still too cheap to bother. People weren't too worried about climate change. They knew it was happening, but they weren't really bothered too bothered about it, uh, back in the fifties and sixties. But it was silly to, if you're sending something up into space, it was silly to fill it all with a load of coal. It can cost a lot of money to get all that, to haul that weight of the coal up there. So they, they went back to this weird old Victorian tech and like, worked it out and went, Oh, it's worth spending all of the money to be able to invent solar panels because we have it in space. And then that technology we've been able to use on land. So yeah, I get geeky about all of that sort of weird stuff,

Jon Spooner ([27:22](#)):

Which has led to you being commissioned by Bloomsbury,

Alice Bell ([27:25](#)):

I am. I am going to write a book about the history of climate change, which will be out. It's not going to be for awhile. Um, but it'll be out in September, 2021. So I'm writing it at the moment. So I have another book out in spring though, if you want to read something I've written, you know, and you can't wait that long, I've got a book called, Can We Save the Planet? Um, spoiler ish. Uh, and that's how.

Jon Spooner ([27:43](#)):

It's a yes, no question.

Alice Bell ([27:45](#)):

Yeah. So the answer is ish, cause I'm one of those annoying academics that says ish to stuff, but that's out in spring.

Jon Spooner ([27:51](#)):

So Alice knows a lot about this stuff and you also are across a lot of the science as well, right? Yeah. You're pretty good on it. So this is your opportunity. If you've got any questions to ask an expert on anything you're worried about really, and even if you haven't got the facts, you've got some places that you can point us towards. Right?

Alice Bell ([28:08](#)):

I'll give it a go.

Jon Spooner ([28:08](#)):

Give it a go. So yes, the stunningly beautiful woman in the front row here. [audience laughs] It's my wife. They're going to look at the patriarchy at work.

Audience ([28:20](#)):

Hi.

Jon Spooner ([28:20](#)):

Yay. Thanks Sarah.

Audience ([28:23](#)):

Um, I'm really curious about the flying thing because I have a, also an unnamed family member who is quite pro flying, but also really, uh, very active from a climate perspective. And I what's your perspective on, cause you talked about flying, being very polluting and I appreciate that it is, but what's the, what would be your perspective on it?

Alice Bell ([28:46](#)):

I think that we should all try and I think we should see flying as an, as, as an incredibly polluting thing, but there's lots of other incredibly polluting things we do. So I think so I flew recently a couple of months ago I took a transatlantic flight and I thought a lot before I did it. And it was because some friends of mine were getting married and I really wanted to be there for their special day. And I felt like, you know, it was a moment of celebrating love and being with my friends who are, you know, like family, uh, and that was a special event flight. I still feel quite guilty about it. And I have some friends in the environmental movement who were like, you shouldn't have even done that. And I respect that point of view, but equally I think that lots of us have reasons why we really want to fly.

Alice Bell ([29:26](#)):

Um, I have quite a lot of family that live abroad. Um, my brother's wife is Malaysian. She has lots of family in Malaysia. That's a sort of distance that you kind of need to get a plane to, to, to get to. And in fact, if you tried to get to America or, uh, Malaysia without taking a flight, you'd probably still emit quite a lot of carbon to get there. Kind of depends on how you do it. But, um, they traveling a long way, emits a lot carbon. I think it's good that people have international connections and that we travel and see other parts of the world, but we don't need to do it alone. So in Britain, just to put some of these things

into perspective, it's worth looking at like the, how, how much each of us normally fly. So about 70% of the flights in Britain are taken by just about 15%.

Alice Bell ([30:11](#)):

So there are people who don't fly at all. Most people in Britain will fly occasionally. So not every year, actually quite a fair number of people in Britain don't fly. Ever. A lot of us will not fly in any given year. About half of us will fly, not in everyday. And then there's a low, a low to fly maybe a couple of times a year. And then there's about 15% that fly like every other month or more. And there are peak there. So there are people who are kind of commuting to their second home in another country by airplane, that sort of stuff we need to drop. And so there's one of the campaigns that we advocate at 10, 10, there's something called the frequent flyer levy. And that would say that all of us would have one return flight a year, which we could take if, and that would be a normal cost.

Alice Bell ([30:53](#)):

There wouldn't be any extra taxation on that. It's just, we could do that. If that's something we chose to do, we should appreciate that it's really polluting, but it might be something we do. If we want to fly more than that, then we'd have to pay a large tax. And this is the frequent flyer levy. And that would be to stop people, creating their lives in way in which they have a second home, two times zones away that they can meet to every couple of weeks. So that, I mean, that's, that's, it's one of those areas of injustice as well that we need to think about with flying. Is it, it's not all of us who are doing that. Flying is incredibly polluting, but being against a lot of flying doesn't necessarily mean that you have to say all flying is terrible and no one should ever fly.

Speaker 9 ([31:29](#)):

Good answer. Right. Great. Thanks Alice, who else has a question for Alice? Um, in Germany, there's a thing called hype site where, um, kids get to stay home from school. If it gets too hot to go. And I was just wondering if it would come to that in England, sometime in the next year, as it was getting that bad,

Alice Bell ([31:47](#)):

It could arguably have got like that a couple of weeks ago. I don't know what your school's, like I said, one of the things they did they've done in Paris is that they've been trying to green areas of Paris so that there, that will help cool it. So if you plant lots of trees, it's a lot cooler and they want to do that in playgrounds. And then they want to open those playgrounds to other people who might be hot in the, in the, in the, in the area. And they might be doing things where they'd close the school, so that schools become open places where people can come for for cool. And those sorts of policies are things that in Britain we may start having to do, you know, the heat wave last year was pretty brutal. And just a couple of weeks ago it was pretty hot.

Alice Bell ([32:23](#)):

It just wasn't very hot for very long, but when you have it for a couple of weeks, it could get like that. The other thing is just, it was so one of the reasons why I've mentioned in Paris is it's not just that it's going to get so hot. We need to stay home from school. It's that we need to think about how we can manage that. So we don't need to stay home from school so that we can build schools that are cool. It mean forms of low carbon air conditioning, or just building our buildings more effectively. I'm sure lots of us work in buildings or go to school and buildings that get very hot in the summer and very cold in the winter. And that's just cause they're badly built and we need to be building better building. So it doesn't

come to that. So it's already getting to the point where, okay, I like my office is terrible. It gets really well. There's a whole room in our office that we can't use for a couple of days, a year regularly. And a lot of us probably live like that and we need to be creating a world where, because that's going to become more common, more common, we need to be, be creating buildings and other bits of infrastructure like parks, uh, just so that we can avoid overheating.

Jon Spooner ([33:14](#)):

Thanks Alice. Hi,

Audience ([33:16](#)):

I watched a program recently that said, um, that one of the biggest ways of, um, contributing to climate change is the amount of food we waste. Is there any sort of active ways of promoting, reducing that on the large scale?

Alice Bell ([33:30](#)):

Well, I mean, we need to think about how we shop. So part of that's to do with individual actions as there's, some of this is sort of rubbing against uncomfortably with the plastic stuff, because one of the things that plastics can do is stop us from wasting food. So it's not just our own food that we waste I'm at home because we bought too much on a three for two or something. And then when we don't eat it, although that's something too. And one of the things that we can help with that is first of all, not having supermarkets that encourage us to buy too much or us just thinking about what we're buying, but then also our local councils, having food waste collection to help us deal with that waste. Well, but there's also so much food waste that happens, which has got nothing to do with our own individual relationship with that food.

Alice Bell ([34:12](#)):

And plastics is one of the tactics that we have used to stop food waste, but we also desperately need to cut down on plastics. So maybe part of it works at the supermarket level. Part of it would be the government could be influential in making the supermarkets act in particular ways. So it would be a local authority level to do with collecting waste, but things that we can do as individuals is be mindful of it. And you're right, it is, it's a huge area of carbon emissions, or it's not just carbon emissions. We often use carbon emissions as a bit of a shorthand because carbon is the worst of the gasses, but there's a whole host of gases that can create the greenhouse effect there that will warm the planet. And so meat thing, particularly for food waste can be, have a big impact

Jon Spooner ([34:50](#)):

Just because one of the things I'm going to come to you right now. But, um, w one of the first things that we had as a conversation was me feeling really overwhelmed. Oh, what do we do? And, and I really took a lot of comfort from do the things that you want to do. You can't realistically do everything.

Alice Bell ([35:04](#)):

We've already had a couple of things that people talk about, like giving up flying, or thinking about food waste, or often people talk about giving up meat or dairy, or like right into your MP or chaining yourself to an oil rig. There's lots of, there's so many different bits of advice that you're given about what is the most powerful thing you can do to take action on climate change? The thing is we all need to do all of the things and that's very overwhelming. So I think the thing I normally say to people is the thing that

you, that you will be best at that will have the most impact is probably as something that you find some joy in. So choose that because you will be most impactful at it. It's a bit like when you go to the gym and you only go for a couple of days and then stopped going because you actually hate it.

Alice Bell ([35:41](#)):

And so you're there, you're a personal trainer, an exercise, or a PE teacher person will say, choose the exercise we love because that's the one you'll stick out. If you love swimming, then keep swimming. Don't keep trying to go for a run if you hate it. And the same thing I'd say is with, with climate action, if you just can't take it, you just can't stop wasting food or something. Think of another thing to start with. And that, cause you'll be really powerful at that. And you'll be at your most infectious with that too. So I say to people, if you love food, challenge yourself to go vegan for a month and see all the different things, you will end up Keating and experiencing because of that, but also invite all your friends around and cook them amazing plant-based food. And then if you're really into travel challenge yourself, not to fly and see all these different parts of the world, but like Instagram it loads and tell your friends about the amazing holidays you had. So, you know, do the thing that brings you some joy, because you'll be most powerful at that. And you'll also be most infectious and then you have to do some other stuff and you can't leave the thing, your rubbish out forever, probably because you have to start, but you'll probably find that easier because other people will have done it and then it will be easier for you to do it

Jon Spooner ([36:40](#)):

As well. Yeah. Thanks. Yes.

Audience ([36:44](#)):

I've got two things to ask about energy efficient light bulbs. So energy efficient light bulbs it's LED, right. Is it true that they actually affect the human body? Like it gives off some kind of weird light that it's actually not good for you?

Alice Bell ([37:01](#)):

Because there is a, there isn't, there's a lot of rumors about that. I have not read any research that would really back it up. So, um, in fact, what you can do, one of the advantages of an led light bulb is you can choose different types of tone, um, which you might find that you experienced more effectively. It might makes you happier. So it like the quality of lighting can really affect your mood. Um, so it won't be worth experimenting with a couple of different tones of led light bulb. And you'll find that one really, you really like it. I do hear from people who say led light bulbs, do this, this and this to my body. There isn't any research to back it up. That doesn't necessarily mean it's not true, but I wouldn't say that it's top of my concerns because it has been looked at enough that I'd say, they're sorry,

Jon Spooner ([37:42](#)):

I've got loads of led lights in here. And as far, and I spent quite a lot of time in here, as far as I'm aware, I'm fine.

Alice Bell ([37:48](#)):

I mean, there is also with animals. So there's a lot of people who don't like led streetlights because they worry that it affects birds and bats. And I'm very, as John said, I'm really into that. So it's worry about back that word, but upsetting the bats. But, um, if you do them well and you think about how you're positioning your light, uh, and why you're doing it, you'll end up actually have be able to have more

control over the lighting because of the nature of led technologies. And that will be better for wildlife with a lot of these things. It's how you do it. Well, it's like a wind turbine to the risks of two birds and bats of run. Turbines gets a massively overstated thing that really kills birds and bats is climate change and fossil fuels, but wind turbines can do kill birds and bats and they will kill them. They'll kill a lot of them if you put them in the wrong place. So it's about where you put them so that you reduce the impact on, on humans and other animals. That's

Audience ([38:36](#)):

Interesting. Cause I've got the next question is like basically I live in Kent and there's a massive petition, but putting massive hecters of solar panels on bird sanctuaries and stuff like that. Now I know that is really good for the planet having loads of solar panels. But on the other hand, I don't think it should be on nature reserve fields where all the animals lives there. Surely it should be like in houses and stuff like that.

Alice Bell ([39:03](#)):

In a field can be a really good idea and some are solar farms. So like ground Mount and a field can be a lot better than using that space for agricultural uses. It can be better the environment than the sorts of treatment then that lands sometimes. So you can have a field that needs a lot of treatment to grow food on it. Um, and that's actually very bad for biodiversity. If you put solar farm on it, you can also have a name. You can have a solar farm that is also very, very good for nature that has lots of wild flowers, beautiful hedges with loads of animals that can live in the hedges. It can be a real sanctuary for, for wildlife, but equally I wouldn't then put it on somewhere where you've already got a lot of biodiversity. Again, we're solar is also, what is your thinking about where you put it?

Alice Bell ([39:41](#)):

You have the same with offshore wind as well. Like we could, you know, you think about where you're gonna put off shore winds, so it's not going to hurt animals. Um, and it's not necessarily going to stir wilderness. Um, cause it's really important that in tackling climate change, we don't just cause a load of other environmental problems, which would, it is very possible that you could do. There are lots of technologies for tackling climate change that if, if we deploy badly will also be damaging for otherwise. And it's one of the things that I really wish we could get past this argument of like whether we should take action on climate change or how much we should take action on climate change. Cause the really juicy stuff is how is how we take action on climate change, what technologies we invest in, in where and who owns them. And that is so important for this new world that we're going to have to create in order to save ourselves from three or four to two degrees warming. Um, and we're not even having that at the moment because we're so busy arguing about whether we can even build a wind turbine or not.

Jon Spooner ([40:34](#)):

That's an excellent answer. I think smaller person, right next door there,

Alice Bell ([40:38](#)):

When you're going shopping, you can find like when you're searching for a cucumber tomato, there's barely anything that doesn't have a plastic wrapper on it. What should you do? I think you can, uh, try and buy things that aren't wrapped in plastic and you can complain to the CIF markets we have seen, there's been a huge amount of action on past X and the last few years. And we can see lots of industry really reacting really fast. Um, we're seeing lots of companies investing in alternatives to plastic that

might degrade more quickly. Um, but ultimately it tomatoes and cucumbers are excellent examples because they are, they are vegetables that need protection, otherwise they'll bruise and they may end up getting wasted and they won't they'll um, they'll degrade quickly and they'll end up being food waste. So it might be also about choosing what vegetables we eat.

Alice Bell ([41:26](#)):

Um, but yeah, I think, I think, I think when you look at seed market, look at the ones that look for ones that don't contain plastic packaging and also right to the supermarkets and let them know that that's not what you want to see because we are seeing quite a lot of supermarkets trialing. Like there's just, you see already a few that try trialing plastic free shops or plastic free sections, um, and how fast they bring that out to the whole of the rest of the country. What depends on how much they think there is an enthusiasm for it or whether they can think they can get away with one shop in the Midlands and ignore the rest of the country. Cause they've had a load of PR on TV about that. Um, and the less they get, they let, they let you, you let them know that you want to everywhere. They won't bring it there. But I mean, we do, there is a bit of a balance between plastic and food waste, which is a bit of something we need to, what we really also need is people to invest in research, to think about how we can make new materials, new packaging.

Jon Spooner ([42:15](#)):

Well, we were talking to, uh, no, I was looking at you actually. Alison yeah. Yeah. You, because you work in textiles and you were telling us about a new textile that had been developed that, um, dissolves in water basically. And it's, it's a wound.

Alice Bell ([42:28](#)):

Oh, I was thinking not for clothing. Right. And then you'd be naked, which could be fun. There's so much that I've been reading about this recently, the amount of plastics in healthcare, that's a real shame because it's really, it's a really useful plastic. It's not the same as like something you get in the supermarket. And you're like, that's a real waste of plastic. The healthcare plastics are important. So we need an alternative

Jon Spooner ([42:49](#)):

When you were saying as well, those textiles meant that when you were using them, instead of them having to send samples across however many hundreds of miles and it takes time and there is the cabinet that actually you can just 3d printers. Oh, haptics. Yeah. You can feel the quality. So new technologies have great things. Yeah. It's nothing there, but you feel what it feels like. Yeah. I want that one. There's a, the younger human with the excellent face paint.

Audience ([43:15](#)):

Yeah. And she'll be doing meat free Monday. Yeah.

Alice Bell ([43:18](#)):

Yeah. I think you should do meat-free Mondays. And then Tuesdays and Wednesdays and Thursdays, I think things like moot meat-free Mondays are great because they, um, help shift our like expectations or change, like the habits we get into with me. So like my mom was always this, one of these people who like had to have meat at every meal, otherwise it wasn't properly a meal. And she was just saying the other day, like, I can't remember the last time I had meat. Cause she just started having a few more

meals that were meat free because I'm vegetarian. And my brother's mainly meat-free. And when she started getting a veggie box and she had to get through a vegetable box, so she didn't really have space on a plate for any meat. Cause you have to eat all these vegetables that were being delivered. And she was like, Oh, I found all these new recipes.

Alice Bell ([43:55](#)):

Cause we often get into a bit of a rut about like, I'm just gonna eat this thing that I'm used to eating and doing challenging yourself to do, not just meat free Mondays, but I really recommend doing things like it began URI or like a whole month where you challenge yourself to be completely. Plant-based just cause you'll discover so many other things and then come the next month. You'll probably start eating meat again. But you'll have like a bit, you'll probably just know more things that you could eat that didn't have meat and you'll probably drop the amount of meat you eat. And we all need to drop the amount of meat. Me. In fact, the thing that often shocks people about this as you need to do it for health reasons too. And they know that they're like, Oh, we probably eat too much meat for our health.

Alice Bell ([44:28](#)):

But the NHS says recommendations on much meat we should eat is actually lower than the climate change. Scientist ones. So climate change scientists alike get a lot of PR bad PR for saying, you shouldn't eat meat. They say, you should, we should all reduce how much meat we eat in a country. But the level that they want us to reduce to, it's still higher than the NHS wants us to reduce to. So if you go, if you do a climate change diet, you'll be at least some of the way to what you should be doing just for your heart really. Or if you do an NHS bait, you know, you go, if you just eat healthfully, you'll already be eating pretty well

Audience ([44:59](#)):

For the planet. So yeah, you're going to do it already.

Alice Bell ([45:04](#)):

Our school is thinking, yeah. So it's more encouraging your school to do it. Cause that gets all sorts of people talking about it in the school as well, which is really good. But I mean, one of the problems with a school or a big organization doing it rather than in a family is it can mean that some people feel a bit left behind, but I think it can be really powerful to do it as a school. It's certainly a good thing to do as a family.

Audience ([45:23](#)):

Thanks. Got another question here. Hi. Hello. Hi. Um, obviously sort of governments and big business and things like that. Probably quite happy with us all sort of blaming ourselves with things and having a healthy economy seems to be one of the most important things to, I guess, most of the world, but that seems to be building new buildings, knocking them down and building new ones. And it's massive waste of energy. Isn't there that goes into this. Then how would you persuade big governments, big businesses that a economy doesn't have to have such a huge amounts of waste

Alice Bell ([45:58](#)):

Depends on the business. So a lot of businesses are actually taking huge amounts of action on all sorts of environmental things. Partly because they see that waste and they don't think it's a good use of their money. Um, and also because they don't want to be part of trashing the planet. And there are lots of

very large businesses that do a lot of really good work environmentally. Um, in fact, doing a lot more, uh, beat have, can work to push governments to catch up. It depends on which business though, because there's also businesses that, you know, a big part of their whole reason for existing is digging a load of oil out the ground and saying five to it. And they're harder to shift and governments often are just slow moving because they just got a lot of other things they want to do. And they get sucked into looking at the world in a particular way.

Alice Bell ([46:40](#)):

Arguably they can often be quite corrupt as well. I mean, this is sort of the thing we talked about earlier in terms of signaling to politicians, it can be very powerful to signals to the politicians. They will start to take action faster. And we have seen periods where politicians in the UK have acted a lot faster than they are at the moment on climate change. One of the things that the government, one of the reasons, the government at the art government at the moment it's so slow is that they keep saying Britain's doing really well on climate change and they just put their feet up. That's partly because we did so well before. They're just putting their feet up and coasting on the stuff that we've done before. We still needed to do a lot more than we were doing, but they're coasting on those previous waves.

Alice Bell ([47:18](#)):

And so we can, we can push our government to do a lot more. I think we can go. We definitely need to, but I think we can go higher than those peaks that we've had previously as well. And we're businesses. It does depend on the business. I think there are some businesses that just won't really work very effectively at a, in a world that second climate change seriously. But a lot of them are on board with that too. I mean, it's, it's different. Like the oil industry is quite a complicated beast to some oil companies are actually making quite a lot of shifts. There's a company that used to be called [inaudible], which has a great name. Don stands for Danish oil and natural gas. And they've shifted to be called Allstate because they're shifting from oil and gas to renewables and they still got oil and gas. I don't know, you gotta be skeptical about how much they mean that they're going to shift. But I think they're shifting a lot more than say for example, shell or BP who are investing a bit in renewables, but still the majority of what they do is oil and gas. Um, and I dunno, it's still be safe. Maybe shell and BP can shift, we'll say, uh, but I think some parts of your industry not only can shift, but are already shifting

Jon Spooner ([48:19](#)):

This investment, looking at where we and our companies that we went for. If you work or study at university or your schools, everyone's got investments in certain, got a little bit of money in the bank where they're looking at those and then challenging people to.

Alice Bell ([48:33](#)):

Pensions. I know that it's a thrilling conversation for a festival, but pensions seriously because of the way the government is now, making yourself have pensions. It's actually gives us an opportunity. First of all, yes, we should probably have some kind of thinking about what we are going to be when we're old, even if we're, especially, if we're worried that it's going to be very hot. Um, but that is a tool that you can have. So you can work with your, with your company to think about where your pension pot is. Uh, Nico's pension. If you work for Lego, then a large part of your pension is on an is owned, is owning an offshore wind farm off the coast of Wales. If you've ever seen that beautiful offshore wind farm off the coast of North Wales, a lot of that is owned by Lego by the people who, and if you work for Lego, when

you retire your, when your retirement fund will probably be quite safe, safer, potentially than it would be, if it was an oil and gas, because it's on in wind,

Jon Spooner ([49:20](#)):

I'm going to wrap this up because we've got one take. We'll do one more. Okay.

Audience ([49:24](#)):

Hey, my question is, we've been talking nicely about all the things we can do directly, almost immediately. And that is about in regards to our human footprint. Is there anybody in your opinion, Alec's ever address that we could get to a state we're happy with and that we're doing as much as we can, but it's not. The footprint is the volume of the footprint. And that population is so successful that we need to put a cap on it. And that human footprint in that regard is too large. And the way of balance is going too far, no matter what we do.

Alice Bell ([49:54](#)):

So there's lots of people who talk about human population as the problem. I think there's a lot of other steps that we need to think about in terms of distribution of resources between our current population and the way how wasteful some members of our population, the heat global home population are before we need to start worrying about that. The other thing is there are quite a few charities that specialized in population and they do for environmental reasons, but the tactics that they generally use are educating women. And I kind of think that we could do that for its own, right? I don't think we need climate change as a reason to educate women and support educating women. So, I mean, I'd say to support charities that support women's rights, that's a good thing in itself and it doesn't need climate change to do that. But I mean, yeah, it is part of it is that there are a lot of people, um, and people have an environmental impact. It's climate change it's by diversity, stuff like that. That doesn't necessarily mean that we need to stop people from having children though. There's a lot of long way from saying there are a lot of people and some of that population are incredibly environmentally impactful in a very dangerous way and killing the planet and saying that we need to put a control on population. I mean, there's so many other things we need to start doing.

Jon Spooner ([51:00](#)):

Do you have any ideas on how you would cap the population? I mean, who do you want to cap? I mean, there's a real, so it ties into all the things we're talking about. I mean, I'm trying to, I'm trying to get this out lightly, assuming it's not in

Audience ([51:12](#)):

Good point that Alex made is, uh, our drain on resources. Can we inhabit places successfully? Are we in habits in places where we shouldn't be living at et cetera? That's really, I guess my point is, can we keep this level of population going sustainably in the long term, other than we've got to this point in this country, that's fantastic, but they'll call it to a point where that's not enough because of the way to resources, you know, that we're taken off.

Alice Bell ([51:38](#)):

I mean, the other thing to say about population is the population of the UK is not a worrying level. It's very easy to listen to particularly some politicians who are worried that we've got too many people and they get some areas, environmentalist, ism get captured by some areas of the far right, very quickly on

immigration, as well as populations. I've got numbers. So populate global population of the world went up massively in the night. Since the 1950s, you sort of see population kind of like that. And then it goes up a bit with various different technological innovations, like the agricultural revolutions couple of hundred years ago and all the stuff like burning fossil fuels, that's actually quite good for keeping people alive in the short term, at least. And then loads of work that's happened, agriculturally, medically, all sorts of things since the fifties. Um, but now it's starting to even out a bit. So it's not that we're necessarily going to have to sustain this level that we had of like rise in human population that happened in the mid 20th century anyway. Um, and, and anyway, certainly I don't think we're overcrowded as a planet necessarily quite yet. We just need to think about our, what, how some small percentage of the world's population as well. Let's remember it is there. It's only the really rich people, the relatively global rich that are really the problem,

Jon Spooner ([52:42](#)):

The way we, we should get rid of them,

Alice Bell ([52:43](#)):

Either rich, that is very good for your personal carbon footprint.

Jon Spooner ([52:48](#)):

You don't want to do it for other reasons, but meat free Monday, super rich Tuesday, make up your protein on Tuesday. And I'm going to draw it to a close because we've got other things that are happening in the shed. This has been one of the most extraordinarily wide ranging, uh, conversations that we've had in the space yet. And it's because your brain is so big and full of facts and information. And it really strikes me again how overwhelming. I think sometimes it can come. I was beginning to feel overwhelmed. I'm going to re-point everyone to Alice 10 tens website is?

Alice Bell ([53:23](#)):

One zero one zero UK dot org.

Jon Spooner ([53:26](#)):

Go there. Loads of really good stuff on there. Also Alice has been extremely generous and contributed some really cool stuff to a little site that we've built recently, which is called [howtosavethe.earth](#). And we've got little cards you can take away. And a lot of things she's been talking about there, and there are links out from there as well to lots of other organisations, including Alice's that you can visit there. If you want to start getting active, choose the things that keep you passionate.

Alice Bell ([53:49](#)):

That gives you energy and makes you talk to people.

Jon Spooner ([53:53](#)):

You're going to, you're going to come back later aren't you. I feel really chat show now. Now we're going to come back. We've done your book. You're going to come back later and play some tunes.

Alice Bell ([53:59](#)):

We're going to play climate theme tunes, which I promise won't be too depressing.

Jon Spooner ([54:03](#)):

They're going to be really super fun.

Alice Bell ([54:05](#)):

I've tried to go for ones that are a bit more energising.

Jon Spooner ([54:07](#)):

Yeah.

Alice Bell ([54:08](#)):

And none of this, like we're all going to die stuff.

Jon Spooner ([54:11](#)):

Um, and we've also got before then at 5:30, we're going to be showing Hidden Figures, which is the extraordinary, uh, story of the women mathematicians who did all of the sums that sent the Apollo missions to the moon because it's the 50th anniversary of the moon landings. We're the Space Shed, um, come and see Alice play. Then we've got DJs taking us on until about midnight tonight if you want to come and hang out with us. Can you please give a massive Latitude Faraway Forest round of applause for Dr. Alice Bell?

Jon Spooner ([54:43](#)):

That was a good one, right? So much to chew on. Although I should say that no one here at the Unlimited Space Agency advocates anyone chewing gum or eating anyone. Since I spoke to Alice 10,10 have changed their name to Possible, a name that better fits this stubborn optimism. Check out their new website. Wearepossible.org. And if any of you like us really wants to get involved in helping to save the planet, but don't really know what to do. You can also check out our website, how to save the dot earth, [howtosavethe.earth](#). It's got loads of suggestions for things you can do right now. Things you can do with a little more effort this week or this year, including some really cool ideas from Alice. [Howtosavethe.earth](#).

Jon Spooner ([55:33](#)):

Oh, Mini Jon. He's awake. Better go. Uh, as always you can connect with us on any of the social medias, we're @untheatre, that's U-N theatre on Twitter, Instagram, and Facebook. And of course there's our dedicated Space Shed website. [thespacedshed.com](#) I'm coming. I promised him we'd write to our MP about the climate crisis today. Thanks for listening to this episode. If you enjoyed it, please subscribe and share us with your friends and family. We'll be back again soon for more Live From the Space Shed. Live From the Space Shed is an Unlimited Theatre production. Season One is brought to you in association with the Science and Technologies Facilities Council, the Cockcroft Institute, The Space and Arts Council England with special thanks to Dr. Rob Appleby of Manchester University. Our theme music is 'Go!' by Public Service Broadcasting, used with their extremely kind permission. Our sound engineer and editor is Andy Wood with additional sound designed by Elena Pena. The show is produced by Jon Spooner and Alice Massey with support from our friends at Storythings. Live from The Space Shed is an Unlimited Theatre production on behalf of the Unlimited Space Agency.