

Lee Pooley 00:00:13

Hi everyone and welcome to the British Canoeing Awarding Body Coaching Podcast. My name's Lee Pooley. I'm the director of Coaching and Qualifications. And today we're here to talk around the most recent research we've done at British Canoeing around the effects of offshore winds to stand up Paddleboarders. And I'm absolutely delighted that we've got hold of the researcher today. So welcome, Darren.

Darren Sherwood 00:00:39

Thanks Lee, thanks for having me.

Lee Pooley 00:00:40

Probably just to start it off, really, this particular podcast is let's sort of drill into a little bit about your background and your experience and why you were the right person to do this particular research.

Darren Sherwood 00:00:51

Yeah, sure. Well, my name's Darren Sherwood, so I've been paddleboarding, I've just working out, getting ready in preparation for, for this podcast. I got my first board back in 2008. That's 15 years ago. So I can't work out if that makes me experienced or just old. So it's probably probably a little bit of both there. So yeah, I started Paddleboarding about 15 years ago, started in the surf based down in the Southwest. And with all of these sort of things, as is my way, I get really into it, lots of surfing and then got a race board and got into downwind and open exploration.

Not super excited about racing and things like that, from a personal perspective, I just, you know, the sea is where it's at for me. Open ocean exploration, surf, open crossings, all of that kind of good stuff. I've spent a lot of time getting blown around on a stand up paddle board in different locations around around the world. Been fortunate enough to paddle board in lots of different places around the globe, which is which is great.

So when the opportunity arose to to do a bit of research, obviously I like lots of people listening to this, I thought I had a reasonable grasp on the effects of wind on Paddleboards having done lots of that, but it was just a bit of an idea. I've never really done any sort of formal research on that, so I did a degree when I was at university.

I'm a qualified PE teacher and have a physical education and sport science background, so I'm familiar with academic research, but I hadn't really considered it in this in the in the field of wind, offshore winds and a paddle board. So when the opportunity arose, I was really keen to get involved. So that's a little bit about where I am and and how I sort of came to be being blown out to shore for the past couple of months on a paddle board, but this time collecting data.

Lee Pooley 00:02:49

Yeah, thank you for that. And I think one of the things we probably want to do is just talk about the outline of the of the research. And, you know, British Canoeing have commissioned several pieces of research to happen in in the area of stand up paddle board because it's one of the areas that actually hasn't got huge amounts of research to back up decisions being made.

And what's really important is that we base a lot of our qualifications and our awards and the safety guidance that we provide needs to be based around insights and evidence and hence why, you know, quite a few research projects are going on at the moment that we sponsored. This particular research about offshore winds. Can you provide us the purpose and the why behind this particular research and why it's so prevalent?

Darren Sherwood 00:03:34

Sure. I mean, like lots of people again listening to this. You know, we've heard of stand up Paddleboarders rescued by RNLI and it seems to sort of pop up with a bit of regularity. And anecdotally, paddling on the Bristol Channel, I've given, you know, a reasonable bit of assistance over the years to people that have got a bit caught out.

So there's kind of been a bit of bit of a feeling that that there was a problem there. But the most recent RNLI figures that were published are, are startling, really. So there's been a 422% increase in the number of RNLI lifeguard rescues. And in terms of what that looks like in terms of numbers and this is that's just for stand up paddle boarding .

And by the way, that's you know, there's other rescues that are taking place there. In 2018, there were 247 rescues. And last year, 2022, there was 1290 rescues. So it's just a huge increase in that. And taking a positive from what has been real negative is it does show that there are more people out there getting involved in paddle boarding, exploring their local areas.

And that is absolutely fantastic. That is what we want. I don't think there are only 1290 people that went paddle boarding last year and they all got into trouble. You know, this is a this is a small percentage of of a large number of people that are out there doing it. And the National Watersport Participation Survey echoes, echoes that as well.

But a huge increase. There's also a 20% increase in the number of lifeboat rescues as well. And over that time period, just that relatively short time period of five years, the RNLI again using RNLI figures, 77 lives saved over that five year period, and half of those came just last year in 2022. So you could imagine a graph in your mind's eye that we're seeing a sharp uptick and the signs are that that isn't leveling off or plateauing or even or even dropping.

Yeah, obviously we don't have this year's figures and it may well be that we are getting to a leveling point. But as it stands at the moment, we're seeing a year on year increase and last year there was a significant increase in the number of not just lives saved, the number of incidents. So that that was kind of the backdrop of this research.

And so that on its own shows that stand up paddleboards are susceptible to being blown offshore, but no one really knows, you know, at what rate or what pace is there, is there any sort of commonality. So this research was really was really about putting some numbers to what we potentially already knew. And as we go through this, you'll see there will be a bit of well, that's kind of what we would expect.

But there are also some really interesting findings that came out of the research as well, which we will get into, which wouldn't have come out anecdotally or through sort of experience. I think they only came out as a result of some considered research into this specific area. So that's how the research came about and that's how the discussions evolved.

Lee Pooley 00:06:47

Well, thanks for sort of framing that really well. And I think, you know, one of the things, you know, you alluded to is that this isn't about us wanting to stop people from stand up paddleboarding. It's far from it. We actually are really pleased that the amount of people who actually participating in stand up paddle board, we just want them to do it safely and enjoy it.

This is all about raising awareness, making people aware of actually, you know, the significance of what an offshore wind is. And you know that our guidance, you know, is all around avoid offshore wind. Yeah, go out and enjoy the sport. It's a fantastic sport. It's fantastic activity. And it's just goes to demonstrate, you know, how many people are purchasing their boards and then going out and enjoying it and, you know, one of the areas that you know about and it's just hopefully to give the listeners a bit of a background is, you know, we are working very closely with retailers and around the point of sale information and all of that hopefully is another way of actually raising this particular awareness.

You're absolutely right, Darren, is people might be listening to this and they might go, well, I can tell you that over a cup of coffee. But as you actually rightly say, these we can actually put figures to this. Now, we can actually say, if you did this, this is what will happen and you'll go through that in a minute.

So this is really about giving this the absolute concrete evidence and insight for us to be really confident in the advice that we provide as the national governing body for stand up paddleboard. So let's explore the methodology. Darren,

Darren Sherwood 00:08:24

The methodology came about through quite a lot of initial testing. So it wasn't there wasn't kind of a desktop exercise in terms of, well, I think this is what's going to happen. So and then I'll go out and do the testing.

There was a lot of initial research into testing and trialling to get that methodology as robust as it could be, bearing in mind that the methodology was taking place in a very dynamic environment where the wind affected environments by their very nature are unpredictable. And the weather forecast, the wind forecast might say force four, but that isn't it's not laboratory conditions that could gusts up to five and then drop down to two and then up and all of that kind of stuff going on.

So the methodology tried to make that as kind of solid as it could be in order to then get those reproducible results in what is a dynamic, dynamic environment. So the testing took place in two different locations as in environments. So we looked at inland because that way we could take away any positive or negative effects of the tide.

There's not, as the listeners know, there's no tidal effect on an inland bodies of water. So that would give us a true picture of the the absolute effects of wind on on a SUP with no other external kind of influences. There's some huge bodies of water in the in the UK as well. And although if you drift long enough you should on an inland body of water end up on a shore somewhere, that doesn't mean you're out of danger that the right time of year or wrong time of year and being poorly equipped and you're on the wrong side of a large body of inland water on a beach or cliffs or something like that could have some real influences as well.

So there is rescue data or information of people getting into difficulties in on inland water as well. So has some practical application as well, but also was a great level benchmark for getting that initial

data. We looked at the three most common or the three sort of typical positions that stand up paddle boarder would be so that be standing up obviously, knelt down on the board and then lying on the board or prone. Again standing and kneeling, even the standing is self-evident why people are standing but again kneeling and lying down on the board again, going through what was available, what was being recommend by British Canoeing and other organizations about, you know, paddling on your knees if if the wind gets up or if you're in areas of shallow water or so it's a recognized position. We didn't invent the position, obviously.

And then I did some research into it using various search engines. If I just say, what do I do if caught in wind on my paddle board, for example, And there's a body of advice there that talks about laying down on your board and paddling prone with your arms, sort of like front crawl on you on your paddle board for anyone that's not familiar with that that was globally, UK advice in South Africa and Australia and places like that.

So those are the three positions that we initially tested in terms of what are people likely to be in the either they're going to be standing, knelt down or lying on the board. So we looked at the effect of offshore winds in those three positions. But the second part of it was how could we be more proactive? Is there is there things that we can do, are there positions that we compare ourselves into which are going to reduce the effects of the offshore wind in terms of our drift, can we slow down that rate of that rate of drift?

And the two positions were sitting on the board half sort of halfway between the carry handle and the tail of the board. And again, that wasn't just a position, that was that was a tested position. A lot of these boards that we looked at, the sort of general purpose board ten six to ten eight, with 32 to 34 some were even 36 inches wide to sit in the midpoint of a board there, which is where typically people might expect to sit because that's where you stand and that's where you kneel unless you're a gymnast is really quite a feat of flexibility to have your legs there

So moving towards the back of the board to where the board narrows down a little bit, made it a little bit more doable. Again, this was you're trying to make any outcome from the research as applicable to the widest body of potential users. We didn't see there was any point in in making something that would only work for a very small minority of super fit experienced paddleboarders because it's unlikely that they're going to find themselves in that sort of circumstance anyway.

So we had the seated position legs in the water and then legs in the water using the paddle as a brake. We called that the SUP brake position and again there was lots of testing with that in terms of sitting on different parts of the board and doing different things with the paddle, dragging the paddle behind, having the paddle out to the side, sitting on the paddle, those lots of different things.

And again, that position was decided through testing as it required the least amount of kind of technical proficiency. There was no real requirement of paddle dexterity to be able to to achieve it. It was able to I think if someone was looking at a picture, there's a little bit more to it than it may be looks, but they could probably if they just glanced at picture or saw something on social media or a poster and they ever found themselves in that position by getting into that position or a close approximation, it's still going to be significantly it was going to significantly reduce the drift over maybe kneeling or or lying on the board, which is what the current advice out there seems to seem to suggest.

So there's quite a lot of methodology there. Like I say, started inland, but obviously we went out onto the coast and to make sure those inland results were reproducible in a coastal environment.

Obviously had to be very aware of safety. We were literally doing what what we were trying to find out. We were getting blown out to sea on stand up paddle boards.

So there's a certain amount of kind of ethical considerations there. Can't just have test participants blown out to sea. So we had to had to make sure that people we were using were significantly skilled enough and had experience in the environment, and we weren't putting anyone in actual real risk. And in terms of the the sample size, I was the control.

So all of the testing except for one battery test that took place in the in the east of England that was in England. I was a as a control sample. So there was something to compare across all of the different environments and all of the different different days. And we used a variety of different sizes and shapes of people.

So the lightest person was 67 kilos. The heaviest person was a just over 110 kilos and using it to kind of manufacturer sort of suggested upper weight limit of those general purpose boards, those that I could find. Sort of 110 to 120 kilos were deemed to be the upper limit of let's say a ten, a ten four, ten six board 32 inches, 34 inches, something like that. That was the upper weight limit that I was keen to sort of explore that upper weight limit and, and then using sort of a lighter person and then obviously a range of people in between those two points there.

Lee Pooley 00:16:38

Darren are those these boards that you were talking about then they would be typical for new and novice paddlers. Those are the types of boards that they would be using, the inflatable kind, the kinds that they may purchase both from non-specialist and specialist retailers.

Darren Sherwood 00:16:55

Absolutely. They were they were all general purpose inflatable boats. And in terms of dimensions that they were sort of typical. The same with the paddles as well. We used what would probably be deemed entry level paddles that would typically come as part of a package.

So a lot of boards, as you'll know, they are sold in the UK as a package, which is normally a SUP, a pump, and it's normally a three piece kind of aluminum shaft, plastic plastic paddle. So that's what that's what we used in the testing for, for this. And across across that range we did 110 drifts. So that's 110 getting drifted and blown offshore. Timing, recording those distances that was done 110 times across that range of different people that we were talking about just just a moment ago. We got to a point where we were just reproducing the same results. We weren't getting any significant anomalies within that, even though, like we said earlier, we can have a force four that was quite gusty force four and then you can have quite a consistent force four.

But that didn't seem to, although it would affect the individual times or the sample for that day. It wasn't really having an effect on the what was being produced in terms of in terms of the pattern.

Lee Pooley 00:18:26

So a huge, you know, 110 tests carried out. I mean, it's a significant amount of testing and, you know, really difficult as I know, because we've spoken about this previously, is there was a lot of data that you just couldn't use because, you know, the winds were not the right strength.

So it was really about making it as clinical as you possibly could and data collection. So there was probably a lot more than 110 tests done. But actually those are the ones that sits within that sort of that profile. So Darren it's always, you know, the methodology in the you know, the testing is the big things. But what were the findings of the of this particular because you did say earlier, you know some you would go, I could have told you that and it confirms confirms but with numbers but you also say that there was some interesting results that came out as well. So yeah, what was the findings?

Darren Sherwood 00:19:21

I mean, the I guess the headline finding was, you know, the existing advice from British Canoeing, RNLI and other organizations of not paddling or to avoid paddling in offshore winds absolutely stands. And that what this research has shown is that we can reduce our rate of drift, but we can't eliminate rate of drift.

So if you are being blown into a busy shipping lane or into a an area of dangerous rocks or whatever, you will still drift into that area. What this research has shown is we can we can reduce that and hopefully the rescue services will get to you before you get to that point of danger. But it won't stop you from getting to that point of danger.

So that really important. This isn't a how to, as you said at the start, this is not how to paddle in offshore winds. Absolutely. Offshore wind should be avoided by but by paddleboarders because you will still potentially end up in in trouble. We can't eliminate that. That was the headline. And again, we probably already knew that. But this is just made that that really clear. And as I say, what we can do, though is we can significantly reduce that drift, which gives us a better chance of of the RNLI getting to us.

In terms of the obvious results laying down on your board, you will drift slower than you would if you were stood on your board or knelt on your board. And that's because of a you've got a smaller profile that you're presenting to the winds as you drift. So that's, that's probably no surprise to people.

Lee Pooley 00:20:54

Darren, can I just ask, you know, that was obviously the findings. But, you know, something that jumps into my mind and might be listeners as well. Is if I lie on my board, I'm probably less likely to be seen surely.

Darren Sherwood 00:21:06

Yeah, absolutely. And the way offshore winds present themselves from an environmental perspective is from the beach, they're quite flat. It looks potentially quite benign. But as you get further away from the shore, then the sea state will pick up, the fetch will increase. And if you're lying on your board, then it's very difficult for for anyone to see from water level. So yeah, you're not very visible at all.

Lee Pooley 00:21:38

So we reduced the profile by lying down. So the results basically showed that if you lie down, you drift less. Yeah. Standing up or kneeling.

Darren Sherwood 00:21:49

Yes. Yeah. The sort of current advice. And again it's the RNLI one of their more recent kind of info stories that they put out was about a woman called Debbie up in Scotland who was blown out to sea on her paddle board.

She laid down and tried to prone paddle back in and using her words, she quickly became exhausted and just laid down on her board. And that's kind of echoed in kind of the current advice, which is lay down on your board, maybe try and if you can kneel and paddle or lay down prone, obviously, if you're lying on your board, that's the most stable position you can, you can be in with centre of gravity so low.

But again, people could quickly fatigue if they're not used to that kind of paddling. So if they then stay lying on that board, then they are going to continue to drift at a reasonable rates at a reasonable rate. So that was the that was the obvious bit, if you like.

The second part of the research which you spoke about was what could we do once we realize we've kind of maybe underestimated the conditions or underestimated our ability in those conditions, we are being blown out to sea and we've tried to paddle back to the shore. We tried to prone back to the shore. And it's clear that we're not going to make that, we are making progress out to sea, away from safety and into potential danger.

What could we potentially do to reduce that rate of drift, to give the rescue services more time to get to us before we before we get into more danger? And that was sitting on the board with the legs in the water. So introducing an element of drag into that. So that did two things, obviously increase the drag, but it also increased the visibility.

So the visibility of the person on the sup in difficulty. So listeners will be able to visualize that fairly quickly. Your obviously your vision is far greater if you're sat up. You can look around, you can look behind you far easier than you can if you're prone, if you're lying face down on the board, you can only really look to the left or to the right, and you're at literally at water level there.

So from the sup casualty point of view, they could maybe attract attention, wave a paddle around, all that kind of stuff. But also from a rescue perspective, if you're sat up, particularly if you've got a brightly colored buoyancy aid on or bright colored wetsuit or a brightly colored heart or whatever it is, then you're just that much more visible to the rescue services once that once they're on their way to you.

So that was the first position. And we've found that to be to have a significant increase in the amount of drag compared to just prone and obviously massively more than being stood up if we've also got the paddle as well. So again, we looked at the what we've called the sup brake position and that came about through again, quite a lot of extensive testing.

We found there were different positions we could sit on our board, as I said earlier and the different things we can do with our paddle that will increase the drag. But they did require a reasonable amount of paddle dexterity and experience. So the SUP brake position is easy to adopt physically. It's not very demanding and crucially, it does free up.

It does give you a spare hand so you can use your mobile phone, you've got in a waterproof pouch to make that 999 call asks for the Coast Guard, and in theory, you could stay on the phone while they're coming to get you or organize that rescue or the situation might change, the wind might drop. You can then update them that you feel you're able to make progress back to the shore and you'll contact them once you get there.

So it gives you that option because you're not reliant on using both hands to use the so you use the paddle there. And that had a significant reduction of over 60% compared to standing alone and over 50% compared to laying down on your on your board. So and that's something that may be well, it definitely isn't out there in that kind of SUP community in that space of of a position to to adopt should you find yourself in an offshore wind

Lee Pooley 00:26:15

Basically is what you're saying is that from standing from changing your position on your board from standing to sat down on your board with your blade in the water, that it's 60% more effective at reducing the speed of which you will be which you'll drift.

Darren Sherwood 00:26:31

Yeah, absolutely. Yes. 63% sorry. It's easy to kind of I think I want to stress is we're talking minimums here this when we're talking about standing on your board obviously for testing that's what we literally did we just stood on the board whereas for members of the public, they're standing on the board and paddling.

So when we talk about in a 30 minute time period, you could drift up to a mile offshore. That assumes that you've got on the board at the beach and just stood on your board and not done anything. So in reality, you know, you're paddling out of the bay because it looks exciting or whatever it is so that a mile offshore in 30 minutes is relatively conservative and could be significantly more.

You'd like to think that people might have the awareness of that they were moving quite quickly, and moving offshore. Having said that, we've only got to look at those RNLI figures to look at that possibly isn't what's happening and people are very quickly finding themselves a long way offshore in what is a relatively short period of time.

Lee Pooley 00:27:40

And did it did it make any difference to how much weight was on the board? So, you know, in terms of person on the board or persons on the board, what did that show?

Darren Sherwood 00:27:52

Yeah, absolutely. That was that was an interesting finding, actually, in terms of having that that sample size. I thought there might have been a bit of difference. But I was surprised at the

significance that the larger paddler, when they were stood up, were blown quicker offshore and obviously they're a bigger person, so there's a bigger surface area. But I didn't think the difference between sort of 110 kilo person and so over a 70 kilo person obviously on the on the ground, that's quite a difference.

But I didn't think it would have that much difference on the water. But it did. And the larger person traveled at a significantly faster time than that, than the smaller person. So that has implications for maybe families, adults paddling with children, for example. And those findings were reversed when we introduced the drag into to that system.

So sat down or in the SUP brake position, the larger person would drift significantly slower than the lighter person, and that was simply without getting too technical, that was that. That was just more of more board, more paddle, more person in the water creating drag in the heavier test subjects than there were in the lighter test subjects. So again, that has implications for potentially families or partners where one's maybe heavier than the other around that.

Now obviously more research would need to be done into that to get definitive figures and results out of that. But it was certainly significant enough to that that it showed that there was certainly a consideration to be made. If you are paddling in a group or in a pair or, like I say, in a family. And we did actually do some testing where we rafted up where we had a larger person.

So again, we obviously didn't use any children in the testing of this for ethical reasons because of the environment that we were working in. But having a larger person at the back of the board and the smaller person sort of sat sort of just in front of them as you might envisage a parent and a child in the SUP brake position that actually worked really well.

Again, the combined weight introduced more drag into the systems. They did they did drift slower and also rafting up and trying to keep that raft together and dropping some paddles down into the water in that SUP brake position did initially through initial kind of testing did seem to work. But just to stress that would need a bit more look to get a definitive to get a definitive answer on that.

But certainly enough like I say, consider your group, your group size in terms of if you're paddling with others, with other people, you will drift it sometimes quite significantly different rates to to each other.

Lee Pooley 00:30:48

So yeah we've heard you amplified how in-depth this research. You outlined the methodology and the findings that have come out and the results. So what was the recommendations from this piece of work?

Darren Sherwood 00:31:04

So the main recommendations, like I said earlier, was stand up paddle boarders should avoid paddling in offshore winds. This is this is conclusive. We've already sort of covered the reasons, the reasons why. If if you do find yourself, you know, let's be honest, anyone that spends any time on the sea, things can change quickly.

You know, despite all the very best planning and all the experience that you might have and I include myself in here, every now and then, the ocean will do something a little bit unexpected and could catch you out. So, you know, that's one of those things anyone could find themselves in this in this position.

If you do find yourself in that soon as you realize you're not making progress back to shore, then adopt that SUP brake position, make that 999 call and make yourself as visible as you can. So the sooner you make that call, the sooner the rescue services will be on their way to you, the better. The longer the time that it takes, then the slower the response time will be or the the larger area they've got to search for you.

So adopt that position, make that 999 call and yeah, hold hold on. Keep looking around. Make yourself visible. Don't assume that you can be seen because you might not be. So that was the first thing that came out of that recommendation. Second recommendation is around your self-sufficiency. So being able to rescue yourself on the water, part of that came out from prone paddling.

So the there's a lot of existing advice out there about if you are caught in winds lay down and prone paddle. What they don't say is that that does require some physical conditioning and to expect the majority of people to be able to lay down and prone paddle five, six, seven, 800 metres into a force four wind, which again, the RNLI data suggested was the sort of the wind window that most people got into trouble.

It is a big ask so that there has to be some physical conditioning there. So as well as going sup paddling, you know, putting a bit of prone paddling into your training or paddling day is good fun and it's really good for your shoulders. Good cross training just gives you that. It's it's kind of the seatbelt version, if you like, you don't put your seatbelt on in your car because you're expecting so to roll your car, you put your seatbelt on in your car just in case.

Prone paddling it's a sport in its own right, but from a paddleboarders perspective, it's the equivalent of your seatbelt. It's just that little bit of that. If you find yourself being blown offshore, you're not making any progress. Being able to lay down and prone paddle that three or 400 metres, 500 metres back to the shore would be a really great thing to have to have in there .

And the recommendation is that that would we would start seeing that in SUP safer courses through British Canoeing, through leadership and coaching pathways, through British Canoeing and potentially other organizations out there. They were the main recommendations.

Lee Pooley 00:34:14

I think it's fantastic that you've been able to make time for us and explain the research, explain and give some real detail behind it.

We have got an abstract of the research that is available as well as guidance that will be found on the British Canoeing Awarding Body Digital Library. And as Darren alluded to, we will be offering Darren's services to be able to support providers during their orientation and their moderations and the hot topics that British Canoeing Awarding Body stipulate as part of update requirements for all providers.

I mean, I think the big last message probably just before we say thank you for your time, Darren, is stand up Paddleboarders please avoid offshore winds, Go out and enjoy yourselves. But avoid

offshore winds. That is what we are continuing to say. But this is if you get caught out, you can reduce the amount you drift. And as Darren said, the stand up brake position is 63% more effective at reducing the speed at which a SUP paddler will be blown out to sea compared to a paddleboarder standing on their board.

So really significant research and evidence and I'm really appreciate your time. Darren, thanks very much.

Darren Sherwood 00:35:34

Thank you.