

Cllr Jim Millard: Hello, and welcome back to talk Richmond with me your host, Jim Millard. In this week's episode I'll be talking to Andy Graham, a senior project manager from the London Wetland Centre about climate change and the threat of flooding. So without further ado. Hello, Andy, welcome.

Andy Graham: Hi Jim, how are you?

Cllr Millard: I'm very good. How are you?

Andy: I'm good too.

Cllr Millard: Great stuff, great stuff. Welcome to the podcast and thanks for giving us your time. So, the London Wetland Centre is of course a great resource in the borough. It's in Barnes, it's a wetland reserve managed by the wildfowl and wetlands trust. So, to kick things off, could you tell us a little bit about the centre and its purpose and exactly what the wetlands are?

Andy: Yeah, no problem. Well, I mean many people listening to this, possibly will recall that before it became the London Wetland Centre, the fabulous resource that it is for local people, it was Thames Water Reservoir and many, many years ago and I'm not quite clear how this happened, but Thames Water agreed to turn it into a wetland centre with us, taking over the management and ownership of that land, and for a few years we removed concrete, developed the wetlands, built the visitor centre, and now it's enormously successful. It's a shining example of how we can bring wetlands into some of the most cramped urban environments in the world, and you can go around the world now based on our experience at London Wetland Centre and see similar developments in Hong Kong, Japan, China and so on. So it's a great asset not just to people, but amazing for wildlife as well, because as wildlife moves up and down the River Thames, it can stop off at the wetland centre, find amazing wetlands where they can feed, recuperate, migrate, stop off. And we're talking mainly about birds, of course, but there's plenty of other things apart from birds, plenty of bats and amphibians, and things like that. Plenty to interest everybody, so a real Oasis. Of course, it's not the only place, not the only wetland in London, but it's one of the biggest and one of the best I'd like to say.

Cllr Millard: Brilliant. Yeah, it is amazing, my family has always loved it, but can you describe just what exactly are wetlands?

Andy: So yeah, good question. It's a little bit more than wetlands just being standing water. It's a bit more complicated than that, but it's also places like peatlands that are seasonally waterlogged, so in after you have to rainfall, you'll see lots of standing water, but many you know most times a year maybe the water is below surface or ground level, and so it could be a wet woodland, could be a river, could be the pond in your back garden. There is an international treaty, the Ramsar treaty signed in Ramsar, in Iran, many, many years ago, which seeks to protect the wetlands of the world. Because wetlands - you know this, Jim. I'm sure many of the listeners do too - wetlands do loads and loads of good things for us. If you think about wetlands around the world, they feed millions and millions of people. I used to work on a project for WWC in Cambodia in the Mekong River basin and it's thought that the Mekong River itself supports over 60 million people. And provides them with their daily requirement for protein through fish. So, wetlands are incredibly important, so there's food, there's water, there's building materials, there's water quality improvements. Wetlands do really good things to improve the water at the quality of water. And also, you know they also help to stop homes and properties flooding. Me. So, wetness can be any anything really from, you know, standing water to places that are periodically inundated.

Cllr Millard: And so, you touched a bit on, you know, the bats and birds and what you know, do you want to talk anymore about what the species that are found at the at the at the centre in Barnes?

Andy: So when you go looking around the wetland centre, what you'll see is a collection of captive birds which are indicative of the birds that we might find in wetlands around the world and in the centre itself or in the grounds of the centre. We tried to explain to people all the different areas of the world and the sorts of wetlands they have so we can go from tropical rainforest to the tundra to Mediterranean wetlands, and each of those has its own sweet or community of birds. So, you'll see lots of ducks from around the world, lots of geese and Swans, and other birds that are specifically adapted to the wetland conditions where there where they're born. So a lot of variety. They're also very beautiful to look at. And of course you can get up close and personal with them.

Cllr Millard: Fantastic, yeah, and what sort of projects is the centre support?

Andy: Well, the I mean the centre is part of the wildfowl and wetlands trust, of course. And we've got ten other centres around the UK, and we support a whole load of projects from local to national to international. I mean if you go into the London Wetland Centre, you'll see that we have hook up with local schools. We do education and learning about wetlands for people, youngsters and adults alike. And there are lots of guided tours we have in the yard outside of the centre but before you get into the open grounds, a lovely demonstration of something that we call suds sustainable drainage system. So how we in London and any other urban area can catch the rain when it comes from the sky and do amazing creative things with it as well as of course stopping us from flooding. So, there are lots of things going on there. And of course, there is a cafe which is critically important. I do like a coffee.

Cllr Millard: It is fantastic, and I read this statistic on your website that said, I mean, because you touched on the importance of wetlands around the world, and I think on the on the site I saw it said around 40% of the world species live and breed in wetlands and that over 1/3 of wetness have disappeared since 1970, which was quite shocking. What sort of risk does climate change pose to wetlands and their species?

Andy: Well, yeah, that's so that's a huge question actually Jim. So, there are some obvious general implications for wetlands through climate change. As the average global temperature increases, it could mean you no longer periods without rain, more periods of drought and of course wetlands you know, need water, they need rain. And so, as rainfall patterns change, which they are already doing, and we're seeing that in London and across the UK and the world, as those patterns of rainfall changed, then the hydrology of wetlands change and the species that have evolved over millennia to a specific set of hydrological ecological conditions may struggle to adapt. Now you know, people might say that, you know, animals and birds have always evolved and adapted overtime, and that is true. The problem with climate change is happening so very quickly. And you know they are in many places say in Britain, we're an island, there aren't many places to go if you're wetland dries up, you've got the very few opportunities to move and migrate.

Cllr Millard: Absolutely, absolutely. And on the other side of the coin, how do wetlands offer natural solutions to some of the issues of climate change?

Andy: Yeah, so in general wetlands can do all those things we just mentioned so they can store floodwater and release it very slowly. So, if this is assuming the wetlands are well managed and we might come on to this, but badly managed wetlands can do bad things, but we need to look after our wetland. So, if we assume that the wetlands have decent hydrology, decent amount of rain, good vegetation, then they'll capture rainfall and store it and those plants will take up water and

evapotranspiration mean that we get water passed back into the atmosphere, which creates the rain clouds and the range that sustain food and humans or wildlife over regional areas. So not just around the wetland itself, so think of the Amazon has a huge wetland - pushing up lots of moisture into the air which actually outside of Ecuador and Brazil, where the rainforest is, you know sustains countries, so that's on the global scale. So, we can think about it like that, as massive pumps of moisture into the air keeping us going. They store floodwater to stop people downstream from flooding catastrophe. And they are great places for growing food. Of course, we just mentioned that harvesting fish and plants to sustain livelihoods of the people living nearby. And they improve air quality, so in urban areas, for instance, where climate change forecasts or scenario, should we call them, say that will suffer really, really extensive heat stress as summer temperatures increase and then you know you know the concrete jungle actually will exacerbate that heating, having water evaporating into the into the local atmosphere will help to keep us cool. And we know that in Paris a few years ago, you know many, many people died because of a really prolonged hot spell. So old and infirm people really, really suffered as the temperatures cranked up and in fact there plan afterwards as they spoke about that tragedy was to increase greening of the city. And I'm pleased to say that of course we're also doing that here in London and other major UK cities.

Cllr Millard: Yes, indeed, and he you know, we've planted over 800 trees in Richmond and continue to forge ahead with that. Talking about bringing it locally, you know parts of Richmond upon Thames as I understand it, or at risk of flooding from rivers in the borough. We've got the river Crane, Beverley Brook, and of course the River Thames. How does climate change contribute to the flood risk there?

Andy: So, so there are two ways in which water can flood our homes and properties. It can come from river flooding, or it can come from rain that falls from the sky onto hard surfaces, and it's got nowhere to go because the drains are now surcharge because obviously, they haven't really been expanded. And we got many more people living here. We've got a bigger urban surface. The waters got nowhere to go, so it creates flooding when it rains. So climate change is bringing us more intense, more extreme rainfall events, so hard surfaces don't do us any favours there and then when you think about the River Thames, if there's a high tide and extreme rainfall events, such as there was last year, we saw what happened and it happens so very quickly. So, climate change will see us experiencing more of those catastrophic, very sudden, life-threatening flooding scenarios, so I suppose that's a headline about climate change and flooding, but there's also the drought thing as well of course, the flip side of that so will get drier summers. But with these extreme rainfall events. So, a lot of a lot of drought, a lot of high temperatures so stressed with people and wildlife, and then these catastrophic rainfall events and when coupled with high tides in the Thames like we said, there can be some tricky times for local people.

Cllr Millard: Yeah, I mean what are the dangers of increased flooding?

Andy: Well, I mean flooding is all about people, isn't it. And if you are unlucky enough to be flooded and I haven't, but I've seen the impacts on people, individuals and communities, it can take a lifetime to recover from flooding. You can surface severe psychological stress. And this is often, you know, not thought about, you know when we see those horrible pictures on our news bulletins at night of places that are flooded and you see the pictures of the silt in the living rooms and the mattress is in the sofa is out in the front garden the day after, well, those things can be replaced, but if you also look carefully you can see you know photos and memories just disappeared forever. And so, you know the psychological stress of flooding is really something that we need to address. And you know, people should be at the heart of planning for flooding and planning for the recovery from

flooding because it's people that suffer the impacts. I mean, we know we can rebuild buildings, of course.

Cllr Millard: Yes. Yes, well that's very clear.

Andy: The other point about that is of course buildings and we must think about our critical infrastructure, which we have lots in the floodplain of the River Thames and of course the Greenwich barriers doing great work, but I think - it's not really my area of expertise or knowledge - but I think it's probably been used more than it was ever intended to be used. It's coming, if it hasn't already, to the end of its design life, so the infrastructure question is an important one for London and Londoners. Setting aside the psychological impacts, but we need to think about how services are delivered into the future to mitigate or reduce or remove the flood risk. Of course, that requires a lot of a lot of planning, forward thinking and also a lot in investment now. And people often say, well, you know, is it worth it? I think you know; I think the question is we can't afford not to do it really.

Cllr Millard: So, Andy, you touched on this. What are some of the solutions available to us to help slow the increased risk of flooding?

Andy: So, the issue around rain falling from the sky, hitting the roofs and the hard services and then flooding our communities because it can't get into drains, that is something that there are many, many solutions for. And we at the wildfowl & Wetlands Trust, along with other environmental organisations, we're lobbying for the more widespread use of what we call nature-based solutions - sustainable drainage, which when you use nature-based solutions, you unlock a whole host of other benefits too. So you know when you when you sort of think about a traditional engineering solution, pipes underground, of course they have their place and we will probably need more of those, you don't really get many other benefits apart from ameliorating flooding, but with nature you get to really if you do it right, adapt to all of the threats of climate change and flooding that are coming our way. So, things like you mentioned this earlier, Jim, but our planting trees. This is a great thing to do because of course trees are great for wildlife, they're great for cooling us down bit of shade, they do the evapotranspiration in the in the summer as well, and they look good. And when we're around wildlife and trees and nature, we feel better ourselves, so there's also a wellbeing benefit. And you know, we know that our urban lives are quite stressful. We're coming out of the pandemic, of course, where we felt sharply the benefits of having an environment and for those people who didn't have a garden, we understood their pain, you know, they couldn't get out and enjoy themselves, and they suffered I think probably, you know, proportionately more than people who were able to enjoy their garden. So, we now know we have a real first-hand experience of what the what the natural environment means in urban areas, so planting trees is great. Creating urban wetlands like the urban like the London Wetland Centre. I don't think we need to do everything you know on that scale all of the time, but local solutions can be very small, small wetlands that capture a bit of floodwater, release it slowly and not rapidly, clean the water up. So, I was thinking sometimes you know we might think of using spaces more creatively, so football pitches, they could be allowed to flood more. You know, taking the flood water out of the streams, putting them in, you know onto a sports pitch and let that water dissipate slowly into the ground over a couple of days and then returning the sports field to its intended use. So, you know in the London environmental strategy at the mayor's office, these things are highlighted as an important way of using space in London, which has got so many other demands on it. So, we need to be creative about the way we use our green spaces.

Cllr Millard: absolutely, and what can we do as individuals to help prevent increased flooding?

Andy: Well, there are those things that we can do to, you know, mitigate carbon gas emissions, so the big stuff that we know about: don't drive, try and walk, eat local food, eat seasonal food, don't buy imported steel, buy less stuff. You know consumption is driving this whole thing up. So, there's all of those things and I'm sure we know all about and councils are signed up for 0, carbon neutral or 0 carbon? Yeah, maybe we could, you know, have our own 0 carbon plan for our lives and that's a good thing. I'm not saying that individuals can turn this around. We need nations to act on an international basis. That's really where the answer lies, and we saw that with COP 26. But specifically, just doing those small things but ramping them up across communities and neighbourhoods is really, really critically important. Have a pond in your garden. Don't pave over your front garden to park your car with an impermeable surface, but if you're going to do it and we all understand you know why we all need our parking spaces sadly, use a permeable solution so when the rain hits the car park in your front garden and it can permeate into the ground and not run off into the street, causing additional flooding and you know walking around Richmond the other day, you can see lots and lots of streets where there are no green gardens, it's all. It's all concrete and impermeable surface. You know, maybe think about. Changing your impermeable car park in your front garden to a permeable one. That would be useful. Planting trees and hedges in your front garden or back garden that helps break up the soil and provide root ways, pathways for rainwater to go into the soil rather than run off again into the drains. And when we get silt from you know the road and from gardens into the drains, that causes a lot of capacity in the sewer and makes flooding more likely. So, anything we can stop getting into the drains like silt and rubbish and things like oil, which is a water policy thing is really good news. I would say turn your front garden into a little climate change Oasis, have a you know a wetland at the bottom of your downpipe and there are many proprietary things you can buy from garden centres now. A little wooden box underneath your downpipe or next to your water butt. Plants and flowers attract some dragon flies and frogs. Have a little pond. All of these things actually will improve our resilience for flooding, but also, you know, make their neighbourhood nicer, improve air quality and if you can do this as a group of people in your street, then wow, you get all of the you know all of that community cohesion as well that sense of wellbeing.

Cllr Millard: Amazing, you know when I put a pond in my back garden, I really didn't expect to see so many dragon flies in London. It's really amazing. It's well worth doing. It's very good.

Andy: Yeah. And they come within seconds I've found you know the wetlands are, you know I've been involved in making over the years - it's as if wetland wildlife is just waiting for the habitat to be created and I think if you go to our website, you'll see some tips there for making back garden wetlands and few little quirky videos on how to do create wetlands with, you know, just stuff lying around bricks, old bit of plastic, washing up bucket. Things like that. You know you don't have to create the Amazon in your back garden, but you can do really nifty things over a weekend with your family. And what better way to spend time then making a wetland that is going to help wildlife and help people.

Cllr Millard: Fantastic, well thank you so much and it's a great idea to go and look on the website. That's all we've got time for, Andy. Thank you so much for coming on Talk Richmond. It's been absolutely great talking to you and hearing about the incredible conservation work happening in our borough.

Andy: That's great, Jim. It's been lovely to be here, and I have to say just walking around Richmond talking to people, people want to do their thing to address climate change and hopefully today we've pointed them in the right direction.

Cllr Millard: Absolutely, absolutely. And it's clear that incredible things happen when land and water meet. So, I want to encourage our listeners to go and visit the London Wetland centre is amazing, it's a great day out. I think Andy's made that very clear and told you all about that. We've also heard that even better than being around green space, we're told that being around blue spaces - ie water - has even higher benefits to our wellbeing, so if you're looking to escape life's daily stresses, a visit to Barnes would be just what you need. If you've enjoyed this episode, please do leave a review. Five stars would really float my boat and subscribe to the podcast. If you have any questions, do email us on talk@richmondgov.uk. Always really, really keen to hear from people. You can find links to the London Wetland Centre and our climate change pages in this episode show notes. I'm Jim Millard, thanks for listening.