Innovative funding to restore nature

19 March 2021, 10.00am

Speakers:

- Gavin Bloomfield, Devon Wildlife Trust
- Tess Tidman, National Farmers Union
- Paul Cottington, National Farmers Union
- Dan Turner, The Rivers Trust
- Matt Scott-Campbell, Moors for the Future Partnership
- Dan Hird, Triodos Bank
- Caroline Mason, Esmée Fairbairn Foundation

Facilitator: Simon Wightman, Esmée Fairbairn Foundation

SIMON WIGHTMAN:
Good morning everyone, hello, so God are so many people here today to talk about realistic funding to restore the environment. Some brilliant panellists to go through some of the work they're doing with their projects. I'm a Simon, I will be chairing the session this morning. My colleague, Luna, is on the call as well, she's helping with technology, I'm inevitably going to click the run button at some point enclose everything down. She's here to help when that happens. I've asked the speakers to describe themselves, where they are. I am a tall white man wearing glasses with brown curly hair, in desperate need of some intervention. A few details and practicalities before we start.

You will be able to ask questions to our panellists, and there will be a Q&A facility on your Zoom, you will find that at the bottom of your screen. I also ask you to vote for question submitted by other participants if you like the answer to that one. You can do this by clicking the funds up -- thumbs up sign by the question. We have plenty to discuss today.

We are going to have a short tea break, I suspect we will be a little bit flexible about when this is, but I suspect it's going to be after 11 o'clock. It's an opportunity for you guys to get a cup of tea and for me to try and sort out some of the questions and make sure we've got some really juicy ones ready to go after the break.

And now the main bit. You will be hearing about four projects that alongside Defra and the Environment Agency, we've provided a little bit of project development grant funding. It's fair to say it has been a crazy year in nearly every way you can imagine. And these projects are all at slightly different stages of development. It's been very difficult to get out and meet stakeholders, and for some projects, that's been more of a barrier than others, so they are at different stages. But I think there's a really exciting load of stuff going on in this space at the moment and I think we all felt it was a good opportunity to have a little bit of a platform to say what we're doing, what we're planning to do and some of the early learning. There's an absolute wealth of experience on our panel. I'm going

to just introduce everybody very quickly. If you have a little wave when I say your name so folk know who you are that would be brilliant: Gavin from the Devon Wildlife Trust. And Tess from the National Farmers Union. Paul also from the National Farmers Union. Dan Turner from The Rivers Trust, and Matt from the Moors for the Future Partnership. And Dan from Triodos Bank.

Thanks and last but not least of course, Caroline Mason, Chief Executive at Esmée Fairbairn Foundation and Caroline's just going to introduce us to the session today.

CAROLINE MASON:
Hello everyone. Just to say I'm a tall white woman with very short tufty hair which is sadly going grey and I am sitting in my kitchen and it's actually nice and sunny and the sun is coming through the window and it's really quite lovely.

I just wanted to very quickly, and perhaps some of you will have heard me say this before in which case I apologise but I am going to say again, just how we've got to this place and how these projects fit into our new strategy. We launched our new strategy in October and that was a fundamental move from a grant funder of many organisations - we'd have up to 900 in our portfolio at any one time. But what we used to do was fund other people's outcomes. We had no strategy or goals of our own, we had no opinions, we had no views on what we funded other than we thought it was good work. And there was no link between our endowment and our grant-making. And that was actually fine for its time and Esmée has done some extraordinary things in that time. But times change and we felt that that really wasn't an appropriate model for the enormity of the issues that are facing us going forwards.

I characterise our new strategy in three ways. One is that we know our purpose as an organisation so where we have expertise and legitimacy in what do we do well, you know, what do we not want to lose from our old strategy but how do we want to build on that. How do we establish our own outcomes that we want to achieve as an organisation. Obviously the two areas pertinent to this: we've been a long-time supporter of environment, food - everything from the community orchards to funding the Chem Trust on pollution and toxins. So, we do have a background in that. We also have a very strong background in social investment, in how to use financing instruments for the purpose of impact: environmental and social impact. In the context of this webinar, those are the two key things where our purpose is to use those well.

The second thing is to know our privilege. Foundations are extraordinarily privileged organisations. Having not come from a foundation background, it's astonishing to me how privileged foundations are and grants are a wonderful mechanism done well and I think we do them quite well. We give unrestricted funding, long-term funding, core funding, but we're more than just grants. We have we have our people, we have our voice, we have our networks, we have our endowment, we have an ability to take risks that other people can't. We're very independent so we can broker things that other people can't. We can say things that other people can't. And so we need to put all of that privilege and all of those resources behind the purpose and the outcomes that we want to achieve.

So, we know our purpose, we know our privilege. And the third is to know our place. We are part of a much bigger ecology and system and so we want to see ourselves as part of a jigsaw rather than part of a pyramid and we want to know what role we can play alongside others. What's our contribution? Where can we contribute most? How can we use all of that privilege and resources to unlock barriers and sticking points that prevent progress? How can we work with unusual alliances? The time is now for all hands to the pump and how can we help in that and then how do we generally learn from expertise?

I think that this is particularly important in the context of green financing and financing for nature because in the same way as if I'm looking at our endowment, I want somebody to invest in Japanese equities, I would want them to know quite a lot about Japanese equities, about what's happening in

Japan, the regulatory context. Similarly, if for example we want to create financial products that take into account natural flood management or pollution, there has to be the expertise from the environmental sector embedded into these financial products. So they should lead in everything that we do. That expertise is not added on to the financial product, it is absolutely crucial and central and I think there's a bit of a journey that we still have to do in really getting the financial services and financial structuring and the experts together as peers to really tackle these things. The four pilots are an exact example of our new way of working.

So, the Devon Wildlife Trust is looking at building a new wetland and visitor infrastructure centre and whether future revenues from that could pay back investors. The National Farmers Union want to set up a trading platform to reduce the nutrient pollution in Poole Harbour. The Rivers Trust are looking at establishing a natural flood management and testing the market for payers of outcomes as well as the appetite for investors in terms of taking the risk on future payments. And Moors for the Future which is around a sort of investment in blanket fog restoration that can be repaid through monetising carbon credits, reduce water treatment costs and reduce flood risks in all of these.

Our job is the outcomes that we want from these four pilots and tests is not about building a financial product. This is all focused on finding out where finance is appropriate, where it works and secondly how does financing these types of environmental outcomes change the way in which investment needs to work. It's really about learning and testing to, as I said, unlocking all those. We take the view that our role is to test, unlock those barriers, find out what works and then help scale it up where that's appropriate.

I'm really delighted with these projects I just think they're really interesting and forward-looking and I'm really proud of the team actually who have done absolute bits and pushing putting them all together and working with all of the organisations and Triodos Bank and Defra and the Environment Agency. It's been a real testament actually for working together and designing together and I hope you enjoy the webinar where we try and show all of this journey that we've been on, thank you.

SIMON WIGHTMAN:
Thanks Caroline. One thing I should have mentioned in sort of the introduction was that we will be tweeting about the events today so if that's your thing, do feel free to join us. We'll be using #FundingNature so if you tweet then please use that.

I'm going to introduce Gavin Bloomfield. Gavin's the wetlands development lead for Caen Wetlands at Devon Wildlife Trust. He's going to talk to us about the project to create extensive new habitat on the north coast of Devon. Thanks Gavin.

GAVIN BLOOMFIELD:
Thank you, Simon. Good morning everyone. As Simon says my name is Gavin Bloomfield, I'm the Caen Wetlands development lead for Devon Wildlife Trust. I'm a tallish white man approaching my half century so with short dark and also greying hair, and I'm joining you this morning from Devon Wildlife Trust's Exeter headquarters. For the first time I've been in here for what feels like years and it's good to be in the office to escape my dodgy rural broadband on the edge of Dartmoor. I've prepared a few slides which I'm going to share with you now.

I've been working part-time for the last 14 months on exploring the feasibility of delivering the Caen Wetlands project. Just to set scene, we're in north Devon, on the Taw-Torridge Estuary and the first slide is showing a view over the Taw, just looking north west out over out the outer Bristol channel and it's just to represent really the amazing natural environment that exists in this location. It's a North Devon biosphere reserve and one of just seven UNESCO wider biosphere reserves in the country the Taw-Torridge Estuary is a site of special scientific interest for its wondering waterbirds and intertidal habitats, Braunton Burrows is a special area of conservation and the whole area is an area of outstanding natural beauty and I'll no doubt invite challenge by suggesting that

Braunton is the most biodiverse parish in England. It's certainly reputed to be down here. So, amazingly rich natural environment. But there are real threats to this natural environment and just to quickly run through a few of those threats: the coastal squeeze is an obvious – the rising sea level squeezing out those intertidal habitats that the wintering bird populations depend on against the hard sea defence that exist around most of the estuary.

We've got significant disturbance to the wintering bird population, which depend on undisturbed, particularly high tides surrounding the estuary. And a bit of work that was done a couple of years ago shows that all of the high tide roofs around the estuary are routinely disturbed by people and the bird population is in decline so there's a there's a real issue that needs addressing there. And another issue particularly given the huge volumes of tourists that flock to this landscape in the summer be drawn by the beach is an amazing place line is the lack of widespread recognition of the outstanding natural environment and wildlife that exists there.

Taking those sort of threats in mind, Devon Wildlife Trust conceived a project which initially looked at sort of catchment scale but focused in on a particular chunk of the landscape and the next image shows an aerial photo of the Caen Wetlands project area and these are two areas of raising marsh and former grazing marsh that sit either side of the river cane which is a river that flows down through Braunton into the Taw. And to the west of the Caen is Horsey Island, to the east plain is marsh they're about 90 hectares and 55 beds.

Devon Wildlife Trust's vision was to restore wetland habitats in these locations and create over 140 hectares of exceptional wetland habitats and also to do something about that lack of visitor facility and recognition by creating an ecotourism hub based around visitor and education facilities. But critically, the plan was to do this using a natural capital investment model and Devon Wildlife Trust is extremely grateful to Esmée Fairbairn and Environment Agency funding at this feasibility stage.

So just looking at what that means, the natural capital investment model. Essentially it means bringing in investment to fund the project on the basis of revenue streams. To bring the ecosystems that the project creates and develops. So in the case of the wetlands project we're looking at services such as carbon being sequestered in the developing intertidal habitats. We're looking at biodiversity and wetland creation which could be packaged as biodiversity as biodiversity. The potential for flood risk management benefits and also the potential for generating revenue streams that enhance natural environment and visitors willing with willingness to pay for an enhanced natural environment and greatly improved natural environment.

We commissioned Triodos and we're delighted to be working with Triodos on this work. Triodos are experts in this natural capital investment area and the next slide essentially just shows a flowchart representing Triodos' project and it's really just two phases. Initially, an investment readiness phase but developing the financial model and the business. Once a business plan is sufficiently well populated and credible, then go out and raise capital on the basis of that business plan. And at the moment, we're still very much in that investment readiness phase where we're refining the assumptions and the inputs go into the finance and the around the cost of the interventions and the revenues that will be generated from some of the services that we want to deliver.

In pursuit of the project vision Devon Wildlife Trust bought Horsey Island in late 2019. Horsey Island's got a fascinating, very dynamic history and I haven't got time to go into any of it now but I will just say that in 2017 its outer bank breached in an unmanaged realignment scenario and the photo that I've got up on screen now shows an oblique aerial image looking east over Horsey Island on a high spring tide and it shows that the Island is almost completely flooded with sea water on a high spring tide.

That's obviously created a lot of change within the site and we've contracted ABPmer. We've been working with ABPmer over the period to understand the physical geomorphology and engineering issue relating to the to the area and the estuary. There's a bit of a psychedelic image that I've put up that just shows elevation chain between before and after the breach. What it shows is an incredibly rapid rate of change in the roughly… years since the after images were taken. You've got accretion in some areas and that accretion is very important and I'll come back to that. But accretion in some areas of over a meter. And that has obviously resulted in a significant change in the habitat with realignment so change from largely grazing marsh and system to intertidal habitats where you've got in the region of about… hectares of mudflats. And probably about 23 hectares of saltmarsh already colonised again in that very short period of time. And ABP predicts that the saltmarsh area is likely to increase to something like 30 and again I'll come on to why that's so important.

So this is a photo of … colonising saltmarsh. It's taken on Horsey Island and salt marshes have one of the highest carbon burial rates out of any marine habitat. And clearly one mechanism that they do that is plant biomass growth as you can see here but actually the far more significant contributor to locking up of carbons is sediment. Plants are very effective at helping to track sediment and allow this to sit on to become more elevated over time. Research in the top 10cms - you get in the region of 30, 50 tons of carbon. So, huge volume of them being locked up in these systems and if you look at those areas of salt marsh that are developing on Horsey Island. If you look at those areas of saltmarsh that are developing on the Island, if you package up carbon into carbon credits, they will have a value of somewhere between £15-£53,000 per year. So really quite significant volumes of carbon being locked out. Quite a range in in those valuations that depends on the different metric that's used to assess the value.

In my last slide, I'm just going through the main lessons learned. Bigger is likely to be better so clearly we know that ecologically that's the case but also in terms of the natural investment side - scaling up might be necessary to create sort of financial terms that are needed. At the Caen Wetlands, we're now looking at delivering the same project over a bigger landscape.

Blended finance is likely to be necessary. This was something that was understood at the beginning of the project. It was always going to be about access to finance or a range of finance. Natural capital investment will form part of the link but there will be a need for other finance to come in to share the burden.

And the next two are really just, yeah very strong and obvious, it takes time to develop a complicated landscape approach project and to get it investment ready. As I say I've been working part-time for 40 months on this project, we've made some really good progress. There remains a lot of work to get to the investment raise stage where colleagues are ready to go out and raise along the basis like we've done. Again an obvious one, dynamic coastal environments are uncertain and are always going to throw up all sorts of situations and we've certainly experienced some of those over the last couple of months in fact. Thanks for your time and I'm happy to take any questions.

SIMON WIGHTMAN:
Thanks Gavin. There's a very quick question from Andrew Ross. Gavin, whose is the airfield next to the site at Chivenor?

GAVIN BLOOMFIELD:
That's RMB Chivenor which is still an operational military airfield but there is a big question mark over its future. I think the last public announcement confirmed that it would remain in use for a period. We started talking to the military about the long term of that site but certainly when you look at the land levels there, there's a sort of inner core of the airfields that they need to protect. There's quite a lot of land beyond it which is potentially capable of pointing in the wider sort of landscape objectives.

SIMON WIGHTMAN:
Thanks. There's some great questions coming in. Just a reminder to you the Q&A function is for asking your questions just so that I don't miss any in the chat. But the chat is open and if you have a comment or an additional bit of information, do feel free to use the chat. But if we keep the questions - just to make sure I don't miss them - please do use the Q&A function and we'll have plenty of time for questions at the end as well. Brilliant, thank you Gavin.

We're going to stay in the southwest now, move a little bit south, a little bit east to Poole Harbour catchment. When the Harbour's been affected by nutrient pollution for a long time it's been really a wicked problem talking about how we solve this but we're going to hear from Tess and from Paul about how the NFU is working with farmers to see how they can get a little bit of ownership and a little bit of control over how those solutions are arrived at. I'm not sure who's speaking first, I'm just going to hand over to Tess and Paul.

PAUL COTTINGTON:
I will start. I'm Paul Cottington, I work as the environment advisor down in the south west for the NFU. Full disclosure, I was slightly nervous about presenting all of this, I'm even more nervous about trying to give an audio description of myself it seems. So, I've written it down, I'm medium-sized bald, bearded white guy in my late 40s with a chunk of grey, which is increasingly appearing during lockdown in my beard. I'm sat in my lounge area down in mid Devon so just down the road from where Gavin has been talking about and in the background stereotypically with the bald white bearded guy kind of look, I've got a bunch of records including a copy of life on earth which is a classic from the BBC TV series.

Anyway right if I get into the presentation, I will share my screen so hopefully this will pop up. This is a project we have been working on now since I mean I've been working down in the Poole harbour area since well for the last 12, 13 years but we've been actively engaged on what is doing the poor Harbour nutrient management scheme since probably mid 2018. what is on the screen at the moment is a picture of Poole Harbour which is down in South Dorset and the keen eyed amongst you will be able to see that one is I mean it's a large Harbour I mean it's the largest in certainly in Europe maybe even the world or something like that there is an awful lot of green tucked in there and this green is algal matte and the important thing about the algal mat is it's restricting the growth and distribution of food for a variety of different wading birds which are all protected under European law so Poole Harbour itself is a natural Harbour it's designated as triple SI it's spa and it's Ramsar for its nature conservation importance so our challenge is to reduce and get rid of the algae in this large catchment where an awful lot of the algae or the nutrients come from historical end and from a variety of different places so it comes from sewage development and agriculture and it's also as an area and you can see in this picture that there's one off to the west there's a load of agricultural anto and actually in the north it's a very beautiful landscape to the east it's very developed so there's a lot of pressure with getting new development in so if the next slide is a picture of the catchment itself it's a large catchment it's about 52 000 hectares 800 plus kilometres squared there's about 548 farm holdings of which there will be obviously fewer farm businesses and the agricultural part of all of this is our requirement is to reduce the nitrogen load or nitrate load by approximately or more than 500 tons yeah so over a third of the amount that's currently going in there has got to be removed there is also within this area we've got the water company they are obviously providing water and sewage for all of the residents there they've got requirements for doing their reduction for nitrates and phosphate and the developers so there's a lot of pressure for new development there they have a community infrastructure levy where they collect money for new development and the requirement is to make all the developments nutrient neutral

one of the poor things we've got with this area for something that full disclosure is incredibly complicated to do this kind of thing yeah our positive and what really helps us get along this journey is the fact that there's a good history of working together so we've been working together on a project well 13 years ago the European project called wagrako which is about our water quality and

it was working with partners in Germany all the way through to now working with Wessex water and catchment sensitive farming on various schemes for reducing nitrates

so essentially what our scheme is all about is is taking a whole catchment approach that brings together all the farmers in the Poole harbour catchment under one entity and in doing this we'll provide the tools and support for reducing nitrates and delivering additional environmental benefits for agriculture and other sectors especially the water company a new development the scheme has a vision which is challenging in and of itself for some people when they read it the farmers in the Poole harbour catchments are the most nutrient or nitrogen efficient in the world and the interesting thing about taking a grand vision like this is it immediately kind of ups the ante and you can start drawing in other things that are needed so in order to get to being the most nitrogen efficient in the world actually we need to make use of things like how do we use our agricultural education places so we got Kingston morwood just down the road from so we need to draw in an awful lot of different things in order to make this work

so we have a number of aims in terms of what we're trying to do our crucial part in all of this and it is the overriding thing of which we are laser focused is achieving favourable status for the spa in doing this we want to enable new markets to develop around trading in nutrients we want to we have to work with existing regulations we want to be able to be flexible we want to be able to enable existing farms to carry on their current farm models and going down to the bottom one the bit that's really matter for the farmers is that it's farmer owned and controlled so they have a sense of purpose and ability to direct what is going on

this map where it's got the outline of the catchment and then coloured in in kind of a purpley movie sort of colour the purpley movie colour indicates all of the farms that have expressed an expression of interest in what we're doing so back in 2019 we went out we presented all the issues to all of the farms said what the options were said look can we or should we take control of what is going on in order to make the reductions via x y and z means of the 120 plus farms that came along almost all of them I think all bar one cities

amounted to 75 of the land area available and we're going to do this through five key aspects firstly about developing operation and management of a farmer-owned and controlled entity which we call Poole Harbour agricultural group secondly developing a catchment-wide governance thirdly developing the right nutrient accounting tool fourthly getting nutrient trading in place and fifthly being able to build on other environmental markets to make it all beneficial so I'll pass over to Tess now

TESS TIDMAN:
thanks Paul so just to describe myself a little bit for you all I'm a young white woman I think I can still say young with long blonde hair fairly tall sat here in a green woolly jumper at my kitchen table in the new forest one of the key points that Paul touched on there which is something that I really want to draw on is that this is a farmer-led scheme and it's one of the most important features of the scheme so the focus is really on supporting and encouraging farmers to drive this and own this themselves so we have a group of seven farmer directors as Paul mentioned who make up the Poole harbour agriculture group they have now become a kick a community interest company so they are able to be sort of their own legal entity capable of taking the scheme forward so that's really essential for when we as the NFU step back and the Poole harbour agriculture group step forward and what you can see on the slide there is just a bit of a demonstration of how that all works if we move to the next slide Paul in terms of structure and support we know we need additional expertise to get this scheme off the ground and to that end we've gone out for an under a number of contracts to pick out two at this stage firstly we're extremely lucky just like Gavin and the rest of these projects have said to have Triodos Bank on board they are looking at a two-pronged approach so that sort of financial and business modelling at this stage of the project with an eye on capital raising as the project moves into year two secondly and just as important we're working with the

agricultural research unit at the university of Hertfordshire and that's to assess and procure a nutrient accounting tool so this is a really important piece of work that exists to really compare and contrast the accounting tools out there in the marketplace and to source the most appropriate for an agricultural nutrient trading scheme what I'd point out at this stage is that for it to work we need that nutrient accounting tool to be verifiable and regulator approved so both in terms of the measures that can be implemented on farm need to be need to be approved but they need to be endorsed by the regulators as well through that accounting tool next slide please Paul

so in terms of funding opportunities again it's a really important year for the scheme this investment readiness year and in terms of looking at funding and investment opportunities moving forward we've got a number of options especially in terms of sort of building revenue we're looking at sort of membership subscriptions management fees for the Poole Harbour agriculture group commissions on completed trades and obviously payments from customers so whether that's the water company developers or farmers and then in terms of wider investment we will be looking at grants from investors grants from the government and possible supply chain membership subscriptions so from your dairy processors and agronomists etc next slide please Paul

so just to touch on regulation and sort of scheme compliance farmers in the catchment already need to comply with existing mvz regulations and our scheme exists in a capacity that can flag up non-compliance and offer additional support to bring farmers up to speed rather than perhaps penalising farmers or taking enforcement action we've had a huge amount of support from the Environment Agency and from csf on this particularly with the EA it's been great we've had some really poor positive talks on

suggesting that those who are part of a red with a gentler and more achievable glide path of targets so it's an incremental target next slide please Paul

so one of the most important features of the Poole harbour scheme is that it's both scalable and replicable so when we say scalable I mean from farm clusters through to really sort of complex catchments and sub catchments and then replicable in terms of the aggregation of sellers so in that case the farmers under a farm business managed owned and run by the farmers themselves for their benefit so right now obviously we do have a laser focus on nitrates but the benefits of trading carbon and certainly phosphates can't be ignored

useful so and lastly just to touch on a couple of sort of project risks and the and the obstacles that we've that we've felt I'll just I'll just pick out a couple there are obviously plenty um

but firstly the regulatory position I mean it needs to really strike a balance between value and you know sort of huge progress from an ecological perspective but also achievability from a farmer perspective there's a risk that you know sort of too stringent to target may only dissuade people from joining the scheme and that ties into whether the sort of incentives and threats are enough to encourage farmers to join a scheme so whether it's a financial incentive moral incentive to join are they enough and equally is the threat of a water protection zone enough and certainly for the most part that's a yes but importantly we need enough buy-in to create a market for trading nutrients so I think all that leads me to say is thank you very much for listening I hope that's been useful and interesting Paul and I are happy to answer questions now or at the end and Simon whichever you feel is most appropriate

SIMON WIGHTMAN:
really thanks Tess thanks Paul just take a couple of questions around the nutrient trading element that we can take before first of all could you give a really sort of introduction to what nutrient trading is and how that and how that works and then sort of a connected question are you looking to create a local market for those trades or to join an existing larger scale initiative?

PAUL COTTINGTON:
so just to go through those very briefly so what would what is required is each farm will need to use nutrients accounting tool and then using a nutrient accounting tool they essentially put in their majority or as many as are verifiable of the measures and things they do on their farm into a calculator and that will produce a value in terms of nitrates that are lost and that will be represented at a kilogram per hectare level each farm is required to meet a certain target and that is defined by the Environment Agency currently in its consent order in what's called a glide path and over time that glide path is going towards the target increases so by a certain period essentially we hit the target level required in order to achieve favourable status and the way this works is where farmers are below the credit below the target amount and they are able to essentially call those credits and there are issues around this around what are double funding so you can't go and sell a credit on where it's paid for say through a government scheme or something like that and they're able to buddy that up with somebody who has a debit and requires something unable to essentially sell it there but they have to do all of this within as well and it's another part of the bits we're testing of making sure that they are meeting their existing regulatory requirements so all of this is a nitrate vulnerable zone and so farmers must meet NVZ numbers and then after that where they've got capacity they can pass it on.

SIMON WIGHTMAN:
And another question Paul around whether you're going to create the local scheme or or partner up with a big scheme?

PAUL COTTINGTON:
and end trade has been mentioned specifically as sort of one existing trading platform so I mean there are so end trade I mean so we're in some ways a slightly different sort of thing because what we're basing it on is having a nutrient accounting tool and so having entrade works as a tool which is specific which is about taking specific measures and specific fields and creating a value and we're looking at the whole of a farm yes I mean something like entry could be a way we have to operate just so everyone is clear within our catchment so you can't take the nitrates in Poole Harbour and have a crack at delivering those up in Cumbria might be kind of nice to have a crack at it but it seems like that wouldn't really work for sorting the poor harbour issue out I would expect so it's a local scheme.

SIMON WIGHTMAN:
thankful brilliant okay we've got some fantastic questions coming in and we're going to be able to pick up on those a little bit later on we're moving up to the north now and we are going to meet Dan Turner project manager at The Rivers Trust and we're going to hear about some of the work that's been going on in the Wyre catchment in Lancashire and I think Dan you're going to try and run your own you run your presentation aren't you?

DAN TURNER:
if we don't come across any connection yeah I am I have pretty bad signal up here so hopefully I can this will go smoothly so yeah I'm Dan Turner from the trust I am in my 30s but probably look like I've just left high school I've got medium brown hair and I would like to say I'm around six foot two but I'm actually quite sure about five foot seven and I'm in Cumbria actually currently on my parents farm family farm in Cumbria so yeah I'll just share my screen

well it's a absolute pleasure to be here today to talk about the Wyre catchment NFM investment readiness project and this project is working in partnership with United Utilities, Flood Re, Co-op insurance, Environment Agency, Esmée Fairbairn Foundation and the project team working on this project is the Wyre rivers just The Rivers Trust and tried us as our financial advisors yeah so the Wyre is located in the northwest of England which drains from the Forest of Bowland and this project is looking at how we can secure green finance from investors which can be paid back over several years by a range of organisations which will benefit from the project and so why is there

need for this project well climate predictions show that we will see increased flood risk extreme weather events but we also know that hard engineered flood risk management solutions alone will not address our future flood risk challenges and must be supplemented with nature-based solutions but mechanisms to finance the implementation of natural flood management still remain one of the most significant barriers to uptake so why the why well there are several flood affected communities in the y church town has experienced a one in fifty year flood event four times in the last 20 years which had devastating impacts to the local community and the local economy so we had some initial modelling and effect modelling done which looked at how we could best place NFM features in the catchment that would have the biggest impact on reducing downstream flood risk and it highlighted that 90 hectares of land use change through the delivery of NFM interventions could reduce flooding to around 56 properties in church down all these NFM interventions are well recognised such as leaky dams hedges low level earth buns river restoration and they all have the ability to store slow and intercept water but we also know that NFM has the ability to deliver several other benefits so things like habitat creation improvements in water quality but also water quantity by retaining water in the landscape a lot of these interventions have the ability to sequest them carbon so tree plus tree planting and re-wetting peat but also this project has a huge amount of social value by working with flood affected communities so they better understand their risk while also helping to reduce the stresses associated with flooding oops so the real challenge in this project is how do we bring together all these various stakeholders through a revenue model so this slide here shows a simple transaction structure and at the heart is a SBV or a special purpose vehicle which will be responsible for drawing down external investment finance to basically fund the initial capital delivery of the NFM and that will be repaid over a kind of nine-year period through contracts with buyers so those organisations that will benefit from the intervention and sellers so farmers and landowners who will host the NFM intervention on the ground but essentially this is a social enterprise model the SBV will be a community interest company limited by guarantee and will have a asset lock on it so any retained profit in this in the entity will go towards further NFM interventions and catchment interventions so the story so far so obviously there's been a huge amount of work gone into this project and we've kind of broken this project into four main work streams firstly the modelling and so with the modelling we've had to kind of sense check that initial hydrological model do a lot of ground trooping we've had an independent academic review but and we've also had some additional modelling done but really importantly we've also created a monitoring protocol to evaluate the effectiveness of the intervention and enable a payment by performance mechanism into the project the next bit is that kind of commercial structure which I talked about before so setting up you know the SPV and the community interest company developing a financial model and developing those kind of commercial contracts and but we've also created an interactive dashboard so local communities buyers sellers and investors can actually engage with the project in real time and understand where the interventions are being placed in the catchment one of the biggest elements of this project is around the buyers and this has been one of the main work streams we spent a lot of time identifying and pitching to different buyers who might be who might benefit and be interested in buying some of these services so we've actually brought together six buyers Flood Re, United Utilities, Wyre council the Woodland Trust, Environment Agency and the Northwest Regional Flood and Coastal Committee and they've actually all come to the table for different reasons and they all have unique transactions and buying a range of different services and then finally that final work stream is the sellers and this is often a group that we kind of forget about a little bit but it's absolutely fundamental to all of this and with a lot of these projects is the farmers and landowners so we've had high level conversations with around 12 farmers and some of estates and we've been doing a lot of work to develop the payment structures and so those payment structures can be broken into three main areas so capital so actually delivering the intervention on the ground a revenue their payment so you know for hosting an NF in NF in NFM intervention and also a maintenance payment ensure that those NFM features are properly maintained in the landscape and they're they maintain as an asset and so we've created a kind of eight-year contract with farmers which is hopefully going to be extendable to 20 years and maybe possibly also up to 50 years so yeah this project has been absolutely fascinating but also as you can imagine very challenging it's almost felt like two steps forward and one step back so I thought I'd just share some of the key challenges we have faced in

this project and I think the main one is you know NFM is place based so how would you deliver a scheme like this that's so place based and targeted and obviously we are you know pretty early on in our journey in ecosystem services and natural capital markets so there isn't a lot of metrics and validation for ecosystem services and also just thinking around that kind of special purpose vehicle we've chosen to go along their community interest company but is this as we scale up and look at developing this and other as is that scalable and replicable so in terms of the buyers a lot of the buyers are actually coming to the table through a cost avoided model but actually that doesn't sometimes capture some of those other added benefits this project is delivering we've done a lot of work around you know the payment structures you know what triggers a payment from the buyers and this has been you know pretty challenging a little bit around kind of that fair share so you know all we've taken a very much open book approach with this project so different buyers are coming to the table for different amounts in terms of the sellers you know how does this project co-exist or you know will be developed with new and emerging environmental land management schemes and how will it co-exist with current countryside stewardship in the catchment contract lengths you know we've had a lot of debate we really want to see these NFM features in the landscape for perpetuity so what are the mechanisms to allow that to happen and we've also based some of that revenue payments on income for gone that isn't a great calculation but so how do we make sure that we move towards more of a you know a payments by results mechanism and also finally the investors it's just you know how do we make sure we're kind of sharing the appropriate risk with buyers and the investors so despite the challenges this project has created a huge amount of opportunity and I think you know one of the main opportunities of this project is you know how do we engage with farmers and landowners to enable them to take a different approach to sustainable land management going forward I also think you know as we move in towards more of our ecosystem services model we need to be careful we don't end up siloed in our approach for instance only focusing on the services which have the highest value but instead we ensure we you know take an integrated catchment approach and delivering the right intervention in the right places I think there is a huge opportunity to diversify our buyers so you know looking at more private sector and also you know I think there's a massive opportunity to properly engage the insurance sector and we are currently looking at how NFM can integrate with national flood damages avoided modelling in terms of the investors I think there's an absolutely beautiful opportunity to enable a crowdsource funding approach to this so wouldn't it be amazing if we could you know if local flood affected communities could invest in their own NFM schemes as a way of raising that initial capital investment and I also think you know finally is that kind of ability to bring that community along in the journey so they better understand their flood risk and feel part of the solution so yeah thanks for listening I have thoroughly enjoyed working on this project and having worked on several NFM projects over the years it's been really inspiring and refreshing to work with several different partners and organisations finding that you know common goal and really trying to make this work thank you very much

SIMON WIGHTMAN:
thanks Dan fantastic little run through what's a really complicated but really exciting project down I'm just going to take one question now and then and then there'll be opportunities for others at the moment but we've got a question about the regional flood and coastal committee and what their role why this might be attractive to them as a buyer and the differences between how they invest in it as opposed to sort of the normal activity of an RFCC could you very quickly describe what an RFCC is and then and then sort of maybe a little bit about your engagement and their interest in the project?

DAN TURNER:
yeah so the RFCC can have take a local levee and help fund an absolute flood risk interventions in in the north west so you know a lot of these buyers are coming to the table it's a completely different way that they kind of look at this a lot of these organisations are not used to kind of that ongoing annual payment obviously you know things like the water companies they are an amp cycle of say five years so you know this is a completely new way of looking so it has been a huge challenge I think

the real benefit for the RFCC is this is integrating a kind of you know a sustainable approach to flood risk management in the area it's bringing on those local communities as well so it meets a lot of what the RFCC drivers are especially in the north west so that's one of the reasons they came they're very keen on looking at innovation and sharing and sharing the cost of flood risk with lots of different organisations

SIMON WIGHTMAN:
brilliant thanks Dan again great questions coming through and hopefully we'll be able to pick up on some of those again we're not going too far to the to the hills of the Peak District and the South Pennines and the more to the future project Matt Campbell conservation and land management program manager for the Partnership and I'm going to hand over to Matt to hear a little bit more about the thinking for the Partnership's doing there on this space thanks Simon and thanks everybody for the presentation so far it's really interesting to see how others are getting on as well

MATTHEW SCOTT-CAMPBELL
so yes my name is Matt Scott Campbell I'm the conservation and land management program manager at Moors for the Future Partnership I'm an ecologist by background and I've been with the partnership for 10 years I'm a tall white male reasonably short hair and a beard with glasses and recently arriving the wrong side of 40. and I'm joining you from my home which is on the edge of the Peak District in Derbyshire and I'm looking out the window at some very good bog building weather nice bit of drizzle going on here so I'm glad others appear to be in very bright rooms I can see other people speaking so glad you've got the sunshine but tomorrow I'll be sending drizzle your way if it's moving in that direction, so I'll try and I'll try and share my slides now so hopefully you can all see that.

yeah so it's interesting listening to all the other presentations this morning Moors for the Future Partnership's project is at a very much earlier stage in our in our development of investment readiness for the work that we've been doing so I'm going to give you kind of an overview of our progress today and a little bit of background about why we're looking to develop investment readiness approaches for doing peatland restoration which is which is what our partnership does so just to locate us on the left hand side you can see in the blue boundary the area of the peterson national park and the green polygons indicated there a lot of the malls in the dark peat that we've been working on for the last 18 years and then on the right hand side we've got very much the same area but in the context of local large centres of population so you can see that the Peak District in South Pennines sits directly smack the bang between Manchester and Sheffield and what we're what we've been addressing as a partnership for 18 years is a legacy of atmospheric pollution that has really degraded the upland peatland blanket bogs of this area in a in a catastrophic way and it's fair to say that it's the it's the most degraded upland in it landscape in Europe when we when we started working on this and some of the pictures you can see at the top you can see very dry and desiccating eroding bear peat and you can see one of my colleagues stood in a peat gully where water has eroded peaked off and you can notice the depth of that gully being several meters deep an anecdotally a meter of peak takes a thousand years to form so we're talking about we're talking about fossil you know level of replicability in in that you know it's not something that comes back quickly but with a with a view to optimism picture below is an area that we restored going back to sort of 2011 and that site is really recovering and so we can we can turn these things around but more often than not the sites that we work on start like this so this is an area called bleaklow and as you can see we've got bare dry eroding peat the hydrology of this bog is completely destroyed there's very little vegetation if any at all you can just see the odd green haze everywhere dotted around and that is just the remnants of potentially some of the grass species just staying there but also you can see the ginormous erosional channels that form in the peat again these are going to be sort of anywhere up to four meters deep and four meters wide and you can get a sense of how flashy this would be in heavy rainfall it's a dry day in this picture taken from the air and you can see the mineral bottom of the gullies where that's actually eroded down to the bedrock but in high rainfall these will really flow at a serious rate and in this condition there's so much there's so much

dis benefit from an ecosystem service perspective when actually peatlands in a healthy condition can be amazing sources of carbon amazing for biodiversity and wildlife and all of the areas in this region that we're working on for those very reasons are all si spa sac areas so very heavily protected areas iconic landscapes you know right at the heart of the nation but with this you know with this serious challenge before us in terms of how do we how do we restore a landscape not just sites but whole landscapes with multiple land ownership complexities across it how do we actually restore that back to some sort of healthy condition where we've got good ecosystem service benefits so it's a huge challenge and in 2003 these organisations on screen came together to form a partnership you know to respond to that challenge you know after the acknowledgement that it's too great to tackle by any one of these organisations individually so our lead partner is the Peak District national park authority and all of the other partners are involved in in either supporting with funding or with specialist technical assistance and liaising across the whole area to try and to try and create a much more sustainable future for the peatlands of the area and initially it was started in 2003 with one heritage lottery funded project it's 18 years later and in any given year we might be running up upwards of 20 projects and this year we've been doing even through the pandemic we've managed to be doing peatland restoration work on something upwards of 45 sites across the Peak District and South Pennines so you know we have been making progress in turning in turning what you know places that look like this on the left into places that look like look like this restored area on the right and in that time since 2003 we've restored sort of 32 square kilometres of peatlands that look like that in that terrible condition and in that condition you know you've got the same acidity as lemon juice there's heavy metals pollutions it's a very mobile substrate and so it's actually very labour and capital intensive to restore these areas back to you know habitats that look like they do on the right where on the right hand side we'll be seeing really good water quality benefits natural flood management benefits carbon sequestration benefits biodiversity access and well-being for all the urban populations that live around us you know just a whole suite of of collateral benefits that arise out of you know fundamentally returning a habitat to a healthy condition so we we've been going for 18 years in that time we've raised about 35 million pounds worth of cash for restoration and as I said the restoration work we do is pretty capital intensive so just here's a few kind of shots to give you a flavour of the sort of things that we do but in essence what we look to do is to stabilise the substrate reintroduce vegetation improve the hydrology to get the bog wet again and then diversify it with sphagnum mosses and sphagnum mosses which is you can see the little plug that the orange hand is pointing to that is the building block of peat that moss and there's lots of different species it's actually quite beautiful if you if you look at it close up there they're amazing but they've got they've got really interesting quality so they hold something like 20 times their own dry weight in water and that's why the bogs are you know these very much wetland water saturated conditions which is which is why the peak forms but working at this scale takes a lot of money and that's and that's part of the challenge that that we're trying to address with our investment readiness project so to take sites that look like this in 2003 with all of the issues that occur on it if we intervene at scale within a short time scale we can set that on a trajectory to being much better even in this picture which is an interim stage is at least fully vegetated so at this stage a lot of the heat loss is removed a lot of the carbon loss is much reduced and obviously biodiversity is far improved as well and natural flood management and other things and you can get in a reasonably short time scepticism all the same place thing you know areas looking much more much more sustainable and when they get like this we start to see a you know a much greater increase in kind of the reduction of disc benefits but you get starting to clip over into the actual ecosystem service benefits side of the impacts of doing restoration like this so what's our project about well what we're trying to do is we're trying to seek natural capital based investment approaches including blended finance to actually raising funding to restore degraded peatlands that I've been showing and the reason we want to do that is that even after 18 years there's a lot left to do and we've had quite a strong reliance up to this point in grant funding and that will remain a really vital part of the story for us but what we you know what we're what we're seeing is there's still so much left to do there's so much degradation still present in the in the habitat and the pace that's demanded of us by the climate emergency means that really we need to develop additional sources of funding to allow this work to continue but continue at an increasing pace so that we can really respond to that and one of the one of the challenges we've had in our

program is over that 18 years there's been some sites which is very much harder to attract funding to than others and we're in effect you know in my mind it's like a jigsaw puzzle a lot of jigsaw pieces are already been fitted in and we've managed to generate revenue and investment into sites to do some work but there's still remnant sites that it that are more persistent in terms of providing kind of difficulty in us actually attracting money to actually do the restoration there so developing options to kind of monetise the avoided losses in terms of disk benefits and potential future you know additional benefits from doing that from doing restoration it's something that we're really keen to do and we know that our partners are keen to look at it and we're obviously engaged with the landowners and land managers all over the area having worked with them for a long time in partnership we know that they are similarly interested to investigate into how we might do this together and so that's what our project is about in a nutshell so in terms of our project design you know phase one for us is about identifying an optimum test case site to try and do this at the site scale as a proof of concept and very much as some of the other presenters have talked about the smalling it's about in effect trying to kind of come up with a transactable model with all the complexity that's in it to enable an investment to go ahead but for us we want to start by finding sites or a site within our kind of core working area where we know that there's appetite from the land ownership to be involved but also where there are very strong revenue potentials that could be that could be realised and where we've got already engaged stakeholders or partners within our organisation that we can actually begin to sort of co-produce you know an investment opportunity together to actually do some of this do some of this restoration that that's so badly needed so the first part is about finding a site and the blue line is where we are in that process so we very much at the start of this journey we at the start of the pandemic we as I imagine many organisations might have been we're scrabbling to adjust our you know our working arrangements and a lot of the engagement that we had planned in with our stakeholders landowners and partners we you know we weren't certain how we were going to do that and it would affect our outcome so we've actually deferred our start date until starting in October so we're now getting into the detail and we're really pleased to be doing that but what I will say is that during that period of deferment we use the time to help have conversations with our partners and land managers and just helped position our project so in my in my view that time hasn't been wasted at all and it's actually been incredibly valuable because we've managed to orientate our work in in

you know in the context of other things that are going on nationally in terms of policy and market drivers and that's been really critical to us to kind of kind of have that extra lead in time in effect which was really kind of in effect now helping us really get off on the right foot and work with real focus so I would I would you know I would I wouldn't take that back I think it's been really useful so as much time before you get going to think about how you might position what you're looking to achieve I would I would definitely advocate for that and then the second phase of our project is about developing the investment business plan and we're working with our corporate finance partners in Triodos Bank to work on that but for us that's very much novel area of work for us and we're really looking forward to working with those guys on that but conceptually we think our model is going to look something like this we as many of the others projects have highlighted we we're anticipating some kind of special purpose vehicle has yet to be defined we would expect you know based on our experience and sort of network of contacts in the region to be involved in in kind of the procurement and delivery of interventions and then it's about payment by results fundamentally and so we've got all the same challenges that Dan was talking about in terms of you know how do we how do we model the outcomes how do we actually set up transactable models for how those outcomes are evidenced as part of as part of revenue payments so we've got a lot of work to do and it's and I can see I'm probably going to need to email a lot of the other people on the panel so it's really nice to hear your presentations this morning on that so next steps for us we're really going to start doing some focused stakeholder engagement and that will involve things like in this picture where we my colleagues and I are on site with a lot of land managers and colleagues from the Environment Agency in natural England looking at looking at the habitats talking about the ecosystem service benefits that we can achieve together if we sort of work collaboratively in this way and we'll be looking to pitch to potential investors and revenue partners and all of this is

about us in essence in essence trying to get an a you know an assessment of kind of what the appetite is to become early adopters for kind of working with us on this and gaining some buy-in and we do think that we're going to need to find people who are engaged with this agenda as much as we are in terms of becoming early adopters because we think it's going to be a real journey that the you know the amount of input from revenue partners investors into kind of what their outcomes are and what they might be willing to invest in and or pay revenue streams for what level of evidence they might need those sorts of things if we can if we can get early adopters to work with us on that and actually tailor it to their to their needs so we can actually design that into our into our work we think that's going to be you know the best way forward for doing it so there's so much there are there are other opportunities that we're looking at the minute and I think they're linked so one of them is elms so we're really interested to see how we can possibly integrate with what we're looking at with elms and possibly see about maybe developing this under the trials for that that might be ongoing we're also working in tandem with the peatland code review that the IUCN has initiated and we're on the on the steering group for that and that'll be really interesting and important from a metrics perspective to make sure that we're aligning with other people initiatives nationally and then the other opportunity that we're developing is that because we've had such a reliance on grant funding over the years our own operating and business model is a little bit hand to mouth in terms of in terms of how we operate so it'd be really interesting for us to try and build in you know mechanisms into this that can fundamentally allow for a little bit more resilience in terms of our partnership funding so that's something we're wanting to focus on a bit as well

so happy to answer any questions it's been a real pleasure to present this work to you we're right at the start I'm looking forward to learning from all of the other projects and likewise share any learning that we've that we're able to develop ourselves so thanks very much for that

SIMON WIGHTMAN:
thanks Matt that was a brilliant overview of the work you're looking at in the peak a couple of questions have come in around the role of the peatland at the peak the peak code could you briefly explain what that is and its role in sort of the project that you're looking at and sort of a linked question that will obviously help to determine sort of the carbon value of the work you're doing are you looking at stacking other benefits within the scheme so looking at other benefits that could be monetised

MATTHEW SCOTT-CAMPBELL:
yeah absolutely good questions like thanks so in terms of the peatland code obviously that is a recognisable standard that we want to try and integrate with as much as possible from the carbon perspective and it's safe to say that you know from the types of interventions that we have to do and the scale at which we do them we know we're going to have to be looking at stackable revenues to make this viable it won't just be about carbon or just about water quality it's going to have to be a it's going to have to be about all of those things and I think that's kind of why we're sort of in phase one of our project kind of looking for that optimum site where we've got the maximum opportunity for sort of stackable benefits really and that's required because the kind of level of capital investment per hectare that's required is is really quite high because you know the areas we're working are so remote that we are you know oftentimes you know we're working a lot with helicopters we have to airlift all the seed that we use in all the plants that we use you know all have to be airlifted to site and so the costs of it are very high that you know the work itself I suppose you know not to denigrate it but it's reasonably simple you know we're flicking a load of seed around and we're planting you know we're planting moss plugs back it's the scale of it and the size of it that adds the complexity and the kind of real need for that capital so in terms of the painting code yes we're looking for you know replicable we want you know we want incredible you know credible metrics that align you know with other people and restoration nationally that's really that's really key and then yes stackable benefits are going to revenues and benefits are going to be I think fundamental to this for us

SIMON WIGHTMAN:
brilliant thank you Matt if everybody can hold on for their cup of tea for a few more minutes I'm going to bring Dan Hird from Triodos Bank to talk to us a little bit now Dan and his team have been sort of the lots of the link that's brought the poor project together they've been involved in all four and therefore in a brilliant position perhaps give us a little bit of an overview of some of the shared learning and also some of the particular challenges that the projects have raised that we're going to have to be tackling as a community going forward Dan over to you

DAN HIRD:
thank you Simon yeah good morning everyone I'm Dan Hird, I'm head of corporate finance at Triodos Bank just I'm a tall white middle-aged male and just to continue the hair theme that all the blokes seem to have talked about I decided during lockdown to shave off all my grey hair which is around the sides and I found myself with the same haircut I had when I was 19 actually back in the 1980s so I'm living with that for the time being I'm just going to try and share my screen

hopefully everyone can see that give me a nod Simon yeah that's great so yeah what we're looking to do is um

is support these four projects a little bit about Triodos really those of you that don't know us we're a European ethical bank we've been around for about 40 years unusually we're a mission-based organisation and we have two criteria that we're looking to support which is tackling climate change and social inequality so everything we do is align to those two objectives we provide as you would expect from a bank banking and investment services but in the area of natural capital the observation we've had is it's not so much lack of finance that's the particular challenge at the moment it's creating investable business models so this is why the advisory team which I work in has been working in this particular space and working on these projects and we're delighted and privileged really to be working with all four of the projects you've heard today these are really important part pilot projects they're different in some senses they're all at slightly different stages in their pilots as you've heard they're all working in different landscapes and we're also trying to monetise different ecosystem services so the business models for each of the four are all slightly different and that's great that's all part of the learning but there are some common features as well the first one really is that they're all place based so they all have multiple stakeholders including landowners and the second one is that if we can get these to work they are all scalable and that's very important for this sector so the learning from these four is discrete and scalable I think thirdly I would say that the the lead organisation of each it's important to reflect on those we've got three national charities and one membership based organisation in the NFU and I think this is just starting to show the very important role that environmental NGOs and other not-for-profits will have in delivering this sort of change so

I'm going to talk a little bit about some generic learning that we've had as advisor on all four of these projects give you a few real specific examples and then talk at the end a little bit about some of the challenges and tools that we need all of us to take this further on generic learning well these are place based projects and as you've heard from the other speakers they're inherently challenging because you've just got so many stakeholders in an area of the country it isn't simply buyers and sellers we need buyers because without buyers we have no revenue streams so we can't actually fund things other than through public grant funding the sellers generally are the landowners and without the landowners we can't affect landscape scale change because we need the consent and the support of the landowners to actually deliver this or even host the interventions but there are other parties as well there is there is the role of who's going to pull the project together who is the promoting organisation drawing together all these parties and you've heard from three or four of them this morning there's also the role of the government you know Environment Agency in Defra government policy support regulation these are all crucial to developing projects you've then got advisors whether they're financial advisors like us or hydrological modelers or people developing metrics all these things are needed to make these projects investable and then finally we've got

investors aren't necessarily key to the whole thing but what we're trying to do through these projects is to test whether it is possible to bring private investment into these into these particular projects and that may all sound very challenging and like almost impossible but what we've found from working on these pilots is it is possible actually and you've got to keep find a way to deliver this where you can keep everyone around a shared vision and on-site with what's being done the main thing about these projects is it's not somebody trying to make money out of other parties the real objective is that we want to restore our environment we want to reduce the risk of climate change and we want to maintain and restore livelihoods and all stakeholders would share those three objectives so this isn't all about raising private investment somebody making money out somebody else it's creating a shared vision recognising each party has their own objectives commercial and environmental and trying to work together to create that shared vision and the open book approach that Dan Turner talked about on the Wyre's worked very well with multiple stakeholders in that catchment a third bit of generic learning the role of the government agencies is going to be crucial in future this isn't a case of government saying well we used to grant fund everything and now we want to turn it all over to the private sector to bring investment in and get this funded privately that is simply not going to happen there is going to be an ongoing vital role for the Environment Agency and you can see through these pilots they're providing the role of facilitator so they can bring people like the RFCC to the table the role of regulator you know talk about Poole Harbour the you know potential for water protection zone but actually supporting the project as an alternative to that the EA are potentially a buyer of ecosystem services at the end of the day the EA are the agency responsible for fluvial flooding and therefore should be potentially a buyer of reduced risk of flooding and we found that in the in the Wyre they are a buyer they're potentially also a grant provider as in the past so the EA has multiple roles to play to make this all a success as has Defra there for developing the elms policy all these projects are dealing with landowners all the landowners have lots of questions about how what we're offering them will interact with elms in three or four years time so it's really important for us that we have the Defra elves team on the end of a court at the phone to answer and support us in all these questions Defra obviously have a role as well in helping the whole sector develop reliable and trusted metrics so that we can start bringing some of the corporate and local authority buyers of ecosystem services to the table as well at the moment we've only got woodland carbon code and peatland code we do need more metrics to scale up the revenues and I think I think the fourth one is just reiterating a point really there is a the role of the project promoter is absolutely key what I've observed coming into this is that all that investment that the Wildlife Trusts The Rivers Trust smalls the future etc have had in developing relationships over decades with landowners regulators you know on the ground delivering their core work these are all crucial assets in helping us deliver some of this stuff because there's trust and so that's been quite an observation for me I think we talked about how I could see a few questions coming on the Q&A how are you actually putting these transactions together to raise capital and this this little slide is a bit like the one you saw from Dan on the river's trust and also mats and it is one which we've agreed a very high level with Matt onwards the future and the crucial bit is on the left hand side what are the ecosystem services that can come off or be derived from a peatland restoration contract and we've listed them all out and in the ideal world we would monetise and stack all of those ecosystem services now I can tell you in reality from working on these projects that is not always possible it's just so much work and some of those ecosystem services don't really have very much value what we have found from the Wyre project is NFM has huge value because the cost of flooding is so huge carbon and biodiversity actually has quite a small value it's important and it's valuable but it needs to be stacked in some instances on something bigger so you know when we're looking at the optimum site for peat restoration for more to the future we may well decide that a site which has significant NFM benefits is in fact the right site to be starting with and we then look to stack some of the greenhouse gas emission reduction carbon sequestration and biodiversity on top of that but the actual driver for the success of the project is probably around the impacts of natural flood management so that's important the delivery mechanism that we're using on certainly three of the four projects is a special purpose vehicle structured as a not-for-profit community interest company that again is consistent with this open book approach no one's looking to make a profit out of this we're all trying to deliver something and a shared vision so let's use a not-for-profit vehicle

that we can all get around that vehicle will raise investment from investors it will then commission the organisation in the catchment to deliver the intervention and it will enter into contracts with all the landowners that's it in simplicity and then around the edges you've got advisors EA Defra community all sort of inputting into this model but the core certainly the way we're seeing it on these pilots the core investment model looks pretty much like you can see on this slide and I've not this started off as a bit of a theory actually about a year ago but I can tell you that we're now I reckon 90 of the way through the Wyre contract and this model has worked so we are sort of trying to build on that a bit of specific learning as you mentioned the Wyre project is the most advanced by far we are now in a position where we have agreed memorandum of understanding with all the stakeholders on that project and we're ready to go out and raise investment so some of the particular learning is around a multi-year natural flood management ecosystem service contract bit of a mouthful but it's really where we're done as mentioned we've got five individual buyers clubbing together to buy natural flood management risk mitigation by signing up to a nine-year contract potentially extendable to 20 years and then 50 and if you imagine you we've got a water company we've got the Environment Agency doing something they've never done before signing up to commercial contracts to pay for natural flood management in a consortium so the form of that contract the payment terms and conditions the length of it the performance metrics these are all really tangible pieces of learning from this project on the on the flip side we obviously have to have a similar sort of contract with all the landowners so those landowners are going to be hosting the NFM maintaining it they're going to be planting trees they all have a different view on whether they want to retain and sell the carbon themselves or whether they want to sell the carbon back to us we've got the support of the woodland trust in that model so again we're developing you know a model of a model private contract with private upland landowners for delivering NFM which sits outside any government scheme it sits outside woodland carbon code elms countryside stewardship this is brand new stuff but obviously the landowners want to know how it interacts with all those traditional schemes so that's good learning number two here NFM performance effectiveness some of the buyers of NFM are saying well we will enter into these contracts we think NFM works we've all done the modelling the modelling shows it works but does this mean we pay for this for nine years no matter what happens how are we actually going to measure whether it's effective or not and actually are we taking all the risk here or should there be some transfer of the risk over to the investors that you're bringing in so you know the water company being a commercial business of course might say to us at the end of five or six years we would like to see a review of the effectiveness of the NFM and the Wyre catchment and if it's not working as we planned it would we would like to either reduce our payments or exit the scheme and that would leave some of the risk of the initial capital with the investor and I think we can all agree that is right if you're bringing investment in there has to be a purpose for bringing external investment in if those investors are getting interest on their money they also have to be taking some risk so what we're working on is what is the right balance of risk between the buyers and the investors and that will be different with every project and it's a quite a sensitive and subtle piece in the final phases of these projects to make sure that nobody is actually taking more risk and getting a better deal than anybody else you end up with a fair solution for all parties and the fourth one here is the exciting thing for me and I think for Dan in particular on The Rivers Trust after a year we are now in a position to go and talk to some investors next week with a two-page flyer on the Wyre model so we're raising a million pounds it'll be sort of a nine-year term of money and we're going to be testing what is the cost of that money and what is the appetite amongst these environmental impact investors that have turned up to various conferences and things for actually investing in the UK's first natural flood management natural capital project so that's going to be really quite fascinating as we go through the next sort of few weeks and of course that learning will benefit all the other projects as well so a few challenges you know to be open about it we the challenges are in terms of developing a shared vision has to be the starting point for all these projects so everyone trusts everyone else and we're all doing it for the right reasons but we all recognise that all the parties do have slightly different commercial and environmental objectives but whenever things get difficult you've got to keep coming back to that shared vision because then you can work through the difficulties so that that is an inherent challenge with landscape scale stuff but it's not insurmountable the projects do take time and resource we've

been working with Rivers Trust for a year deaf Wildlife Trust probably for six nine months we're just starting really on Poole Harbour and most of the future projects so there are different phases but they all they're all they are pilots we are learning things brand new but realistically they are going to take a year at least to do each project so how do you resource that is a challenge you know and not not just for the advisors but for the organisations themselves who put a huge amount of time and effort into this I have observed a little bit of a challenge coming through in discussions and this is a slight distrust or resistance to private sector investment the government is very clear it wants to try and lever in private investment it's clearly set out in the 25-year plan there's a feeling we need private investment to accelerate restoration of our environment at a pace that government alone can't do when you get into it there is a bit of a distrust and it stems maybe back from PFI or the feeling that environmental NGOs are the ones who care about the environment and investors and bankers just care about making money so we've got to try and somehow bridge that divide and make sure that everyone understands why we're bringing investment in and that the investors are taking a suitable amount of risk and everyone understands the rationale for bringing investment in so I think that's a bit of a challenge and it's I very much feel that on our shoulders a little bit at trade loss in trying to structure these things as investable models and making sure we bring the right investors in and the terms are right as well so and then the fourth one really is a generic one really acceptance that just business as usual doing things as we are is never going to achieve the scale of change we want and that everyone has to try and consider doing things differently think a bit left field be a bit more can do and that goes all the way back to conversations meet with the Environment Agency well hang on we've only got a three-year funding cycle we can't enter into a nine-year contract well you're going to have to because landowners will only do this stuff if we can offer them a long-term contract so the Environment Agency take that problem away and the question is do they come back and say no computer says no we've never done this before and we can't do it in the future the answer is no the environment has come back and said yeah we recognise that we need to try to start trying to do things differently we're up for it and that's great and the same with the water company same with the local authority so we've seen a lot of people changing their thinking and realising that we need to you know just take a few risks and do things a bit differently to achieve this sort of change I think the tools needed we do need this open dialogue with Defra around how else would yeah and…

SIMON WIGHTMAN:
Just checking I've got many slides left?

DAN HIRD:
that's one I'll speed through Simon sorry open dialogue with Defra about how elms will work we do need more metrics a lot of the ecosystem services are voluntary probably at the moment apart from the woodland carbon code there it's important that NGOs get the resource and support capacity build and a massive thank you to Esmée Fairbairn Foundation for years and years of support actually but particularly around these projects and also people like Andy Slaney at the Environment Agency for ploughing through and developing the investment readiness fund and my dream as well as Dan Turner's is that we develop an environment that impact tax relief to allow or incentivise ordering members in public to invest in this sort of stuff that's it Simon thank you

SIMON WIGHTMAN:
thanks very much Dan that's a really useful really useful overview what I'm going to suggest is that we don't have a tea break I'm really sorry for anybody who was desperate for a for a cup of tea or a glass of water but we've got some really good questions coming in and I think we don't have a huge amount of time left so I think we will crack on and deal with those panelists if you are desperate for a glass of water or something do grab one but otherwise we will we will crack on we have a lot of questions if you get a chance if there are any that are very specific to your project that we won't get around to I've seen some of you have already been typing in answers there and that's fantastic but I'm going to go I'm going to go straight to some questions and Cindy was really early really hot off the blocks with her question and I think some of it I hope has been answered through the

presentation but there is a question here I think in Cindy's question about the role of investors and what their expectations are I think has come up a few times and who paid them back and I think Dan touched on this do you even need an investor if you have a bio and a seller damn do you want to do you want to pick up on that first?

DAN HIRD:
yeah I can do I mean I think there's three versions isn't there one we should be talking about private investment government should be funding this from higher taxes because it's so important put that aside a lot of people probably share that view the second one is we don't need private investors it's one more party at the table with different objectives to everyone else all we need is buyers and sellers and the mechanism of bringing them together through some sort of trading platform and the buyers buy the system services and sellers sell it and we just do it that way without private investment I've got some sympathy with that and it might be those sorts of models can be developed the third one is actually you'll never bring those parties to the table because there's a big upfront capital required to deliver the intervention the buyers will buy that intervention but they want to see it delivered first and they'd like to spread the purchase of it over a number of years that's where you maybe can bring in upfront capital and the question is you know who are the investors what's their motivation we're not talking about venture capitalists here we're talking about really environmentally motivated investors who are prepared to take a bit of a risk to front funds some of these interventions and want a reasonable rate of return and we none of us on in this group can point towards a transaction where this has happened yet which is why these pilots are quite interesting really and I think we will be starting to test out particularly maybe on the Wyre will be the first one we see and what appetite is there for investing in that project and what will the terms required by the investors be and who and indeed who will the identity of the investor be

SIMON WIGHTMAN:
thanks Dan Caroline could you come in a little bit from sort of I guess the different types of investor and perhaps ranging from the sort of the corporate investor that we've talked about right through to perhaps our role in this space?

CAROLINE MASON:
yes I think so part of what we do is to is to look at investment models that might look different for the future and I think there will be investors who are able to understand that outcomes based models are worth investing in for the future and I think there is a huge amount of pressure from shareholders now from governments from customers from so I i feel that there's quite a lot of capital out there looking for these types of investments what we have to make absolutely sure is that what drives the way those investments get structured is not maximisation of profit it's not a focus on return it's that very fine balance between where does where do these two models fit and so a lot of what we do our background in through our social investment which we've been doing for about 15 years is testing and testing where the model breaks where does it or where does it where does it stop working where does it push towards finance or whether where does it push into subsidy and neither is right or wrong well but understanding where that sweet spot is of being able to sustain an investment as well as well as social or environmental outcomes and there's a lot of learning to be had there and I think that for me personally that's in terms of Esmée

doing these kind of things helps educate not only so I think it's not just about capacity building in in the not-for-profit sector it is actually educating the finance sector as an investment sector as well how that model needs to adapt so I'm really hopeful for this and that's why these are so important because what we're doing is uncovering all the barriers and possible you know comebacks and you know how it might work how it might not work and that is to both bring to get educate both sides of the of the of the transaction but yeah I think there are and you know foundations are looking for these kind of investors there are there's a whole the whole role of impact investing is now becoming really is now really growing so impact intentional impact first investors who start from the principle of the purpose of this investment is to achieve environmental outcomes so having models like this

which has have been shown to work are the first step in I suppose in a pipeline of activity that that I i honestly believe will grow

SIMON WIGHTMAN:
thanks Caroline brilliant question for Matt is there a certain ecosystem service that's prioritised above all others in some of the Moorland projects that you're looking at or does it differ depending on the particular place the particular opportunities and the partners involved?

MATT SCOTT-CAMPBELL:
thanks for that question I was actually just tapping away type in an answer to that but it's fine I'll answer it for everybody but yeah it's a good question and I think what we've seen since 2003 is that the funding vogues for grants has changed so in 2003 a lot of funding that we were able to leverage into the to the peatland restoration was very much biodiversity focused and that was a real you know as a real vogue at that time and then over the years that's changed and developed and in a really positive way because I think what you know what we can see is that peatlands have become much more understood in terms of the range of ecosystem service benefits and or dis benefits that that are derived from them and so and so kind of you know grants in the past that may have had a very specific you know lever for the funding so for example biodiversity or carbon or something like that they're very much more now fully acknowledging that actually it's a there's collateral benefits so if you restore if you restore a blanket bog for NFM reasons you still get all the carbon and water quality and biodiversity benefits if you restore it for biodiversity you still get the NFM and and all of those things are multipliers and partly that's why we're thinking about the necessity of of kind of having stacked revenues on our on the project because it's just one of those habitats that if you restore it you get an awful lot of good benefits coming off of it and then it becomes about the site and where you're where you're looking and then it's you know very much well who is benefiting or dis-benefiting who's experiencing costs by virtue of areas being in poor condition and that kind of stuff so s yeah so you know in an investment sense I don't think there will be kind of like a predetermined prioritised you know focus on one outcome or another I think it will be driven by the opportunities on any given site but I think there is a wide and growing acknowledgement of just the range of benefits that come out of peatland restoration

SIMON WIGHTMAN:
thanks Matt next question is directly to Dan but to down herd but I think it's I think it's pretty key to lots of the stuff we're going to talk about so I'm going to I'm going to give an opportunity for anybody who wants to chip in and it is it is this question that Dan raised around different ecosystem services having a different value so Dan mentioned that natural flood management because of the damaging cost of flood is it fairly easy to monetise in the fund and the sums can be big whereas carbon the suns can be smaller and Dan was mentioning biodiversity and the restoration of nature and I find it very hard to think about how we actually tie revenue streams to that really critical and important thing that we all want these projects to deliver is it always going to be incidental as a benefit of things done for other reasons or can we sort of integrate it into the nitty gritty of the project Dan do you want to do you want to kick us off and then I'm going to open it to the rest of the panel?

DAN HIRD:
yeah I was just being really honest there about we were scratching our heads wondering how do we fund this product this end of this project in the Wyre and we looked we thought right there's NFM there's water quality there's carbon sequestration because we are doing some tree planting and restoring peat and there's biodiversity gain because we're creating a meadows and wetlands and at start the project we thought we'll stack all those four benefits then we started looking at it and we realised that the NFM had very high value water quality was all about really would the water company want to buy that and they didn't value that particularly highly in this particular pilot so that didn't have as much as we thought the carbon we realised actually belongs to the landowner because we're planting trees on their land they own the carbon not the vehicle so it's quite hard to access

the carbon when you talk about stacking revenues and the biodiversity was relatively small in terms of value so what we've done and Dan might want to jump in on this is we've said look this let's lead on the NFM because if we can get the NFM funded and if we can get five buyers to pay to pay 250 000 pounds a year for nine years we've got a project on top of that let's try and do what we can with the carbon let's try to maximise the biodiversity in this whole project using the NFM if you like is the core funding and let's try to develop some new things and Dan talked about a dashboard live webcams of all the interventions engaging the local community so I think you can do a lot more things that we all want to do with these projects you've got to have something at the heart of it which makes it work financially so that's the way we've damn up and jump in the way we've looked at the Wyre it's not just a straightforward NFM project it is a lot richer than that but the NFM is the commercial driver.

SIMON WIGHTMAN:
thanks yeah and then Gavin have you got your microphone off because I'll come to you afterwards.

DAN TURNER:
damn you want to keep in there yeah absolutely I mean at the current time NFM is you know has the greatest value and that seems a crying shame because it's almost you know we're very we end up in a very reactive situation NFM is such a driver because it costs so much you know I think we've we've desperately got to move away from this model don't we and we've got to understand the value of nature and as a whole gentlemen and it's just at the current time NFM is that one but as we realise you know the huge impact that we have on nature and the value of biodiversity as we go forward I think they will you know come along and actually be as just as much valley but I think in the current time it seemed you know it is a great shame that we are kind of very reactive aren't we until we have some major kind of biodiversity crisis that is going to cost millions you know it seems a great shame so I think I just encourage everybody and policymakers let's be proactive and let's not get to that point

SIMON WIGHTMAN:
Thanks. Gavin?

GAVIN BLOOMFIELD:
yeah I think I mean it's been it's been really interesting hearing about the other projects I think the balance of income sources from any project is going to be different Caen Wetlands for instance a major source of the revenue is always considered to be on the visitor income side of things but that said you know I think it is a question of stacking up all various sources so visit visitor income might still be the main source I responded to one of the questions asking about by the biodiversity offsets we've and we've started discussion a local planning authority about using the Caen Wetlands project as a bank of habitat credits is essentially which developers could book a buy into and they're pretty favourable to that view and particularly with net gain becoming a mandatory requirement in the near future I think we can anticipate more funds coming into in into that arena so I'm hopeful that that the diversity you know will bring in and by diversity uplift will bring in funding of course the biodiversity up is also one of the things that's going to be bringing people in and generating the visitor revenue and creating a better site a better site for wildlife and creating really good wildlife experiences for people to enjoy

SIMON WIGHTMAN:
thanks Gavin. I'm going to come I've got a Paul I'm just about to come to you actually for a question around for you and Tess around how important is pharma buy-in in working relationships and trust the importance of the robustness of the target measurement so that question around I trust not only in you with a broker I guess but also in the whole structure and that we mentioned payment triggers and that sort of thing all tests you want to take that one first

PAUL COTTINGTON:
I'll start with it I mean it's crucial it's been the basis of everything we've done they it's the farmers who have wanted to take this kind of approach there it's been really inspiring actually in terms of I'm just kind of reflecting on the previous question you know we have a laser focus on our imperative driver which is in order to derive to reduce nitrates in order to hit a certain target when we've gone out to the farmers and spoken about this what they've then done is translated that into all the other things that accrue as a result of doing that so in doing nitrates you reduce phosphates which has a value to the water company there you're also when you're doing nutrient accounting you're taking into account carbon values as well and so it's been interesting how the farmers have been able to see how this might transform what it is they're doing but I think really what really what they've wanted is something that works for them so often stuff that is designed is designed by a regulator or somewhat outside party and it doesn't fit with the way you know they're outside and it's really cold and they need a simple way of touching buttons on screens without hitting a thousand things at once they need things that work for them and so I think what's really helped with these guys so far with what we've been doing is that our focus is around what their user requirements are within the context of everyone else Tess I don't know whether you've got anything to add?

TESS TIDMAN:
no I completely agree and it's been over the course of the project so far and I know we're sort of still in in the early days but it's been really wonderful to watch the shift in attitude from farmers initially being quite defensive and sort of the finger being pointed at agriculture and them sort of feeling responsible for nitrate leaching to a real proactive ownership of a scheme that is going to demonstrate an awful lot of environmental and public good you know they are really quite pleased to be to be a driving force behind it so yeah I know I could completely agree with the sentiments of the other project and what Paul has just said there

SIMON WIGHTMAN:
thanks everyone so when I when originally had the idea to pull this together I thought how are we going to fill so much time for Q&A and all that kind of stuff and we have not got anywhere near enough time in a very predictable way to cover all the fantastic questions that people have put forward this isn't it I think it's really important to say so as Esmée we are really committed to getting the learning not only from these projects that they progress but in England we have the investment readiness fund and a wealth of different projects that are trying to tackle just the same questions that you've been hearing about today so a commitment from us that as those projects wrap up we will run more sessions like this and we will we will publish that learning and share that learning and develop a platform with others not ourselves but absolutely make sure there is a platform that this learning can be shared and that we're not constantly reinventing the wheel which I think is always the danger with some of this stuff I was I was going to quickly whiz through the panelists for our final thoughts I think probably due to awful chairmanship from my part we probably don't have time for that so all I'm going to do is say thank you to such a fantastic group of panelists I don't just mean what they've put into their brilliant presentations today but the work that they've put together in coordinating complex partnerships in really tackling these questions and in not being afraid to share not only what's worked well but also some of the really nutty problems that they've experienced along the way that really have to be the focus of the next stage not just through these projects but the work that all of us are involved in thank you for the amazing questions which I'm going to make sure I don't lose because they will help to inform some of our learning to see which questions people are particularly interested in in hearing about so with that said and with final thanks to our panelists to everyone who's joined us thank you very much.