

Environmental Audit Committee

Oral evidence: Ancient woodlands, HC 1750

Wednesday 11 March 2026

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Members present: Mr Toby Perkins (Chair); Olivia Blake; Julia Buckley; Jonathan Davies; Carla Denyer; Barry Gardiner; Alison Griffiths; Chris Hinchliff; Sojan Joseph; Dr Roz Savage; John Whitby; Sammy Wilson.

Questions 1-36

Witnesses

I: Katharine Flach, Biodiversity Data Officer, Thames Valley Environmental Records Centre; Dr Keith Kirby, Visiting Researcher, University of Oxford; Nick Phillips, Principal Policy Advocate for Forestry, Woodland Trust.

Examination of witnesses

Witnesses: Katharine Flach, Dr Keith Kirby and Nick Phillips.

Q1 Chair: Welcome, everybody, to this one-off session of the Environmental Audit Committee looking at the issue of ancient woodlands. I am pleased to say that we have two excellent panels to assist us with our deliberations today. Our first panel comprises of Nick Phillips, Katharine Flach and Dr Keith Kirby. I will start by asking you to introduce yourselves, your organisations and your involvement in ancient woodlands.

Nick Phillips: Hi, I am Nick Phillips. I lead on forestry policy for the Woodland Trust. Ancient woodlands are one of the core reasons why the Woodland Trust was created. A lot of our work is about managing our estate, which includes a lot of ancient woodlands. We also do policy work and outreach work advising those who own ancient woodlands on how to restore them. A big part of our charitable work is around ancient woodlands.

Katharine Flach: Hello, I am Katharine Flach. I am currently a biodiversity data officer at the Thames Valley Environmental Records Centre, which is an accredited local environmental records centre. I was previously at the Wildlife Trust for Beds, Cambs and Northants, where I was working as the ancient woodland inventory officer as part of the national inventory update.

Dr Kirby: I am Keith Kirby. I am a researcher in the University of Oxford's department of biology, but before that I was forestry and woodland officer at Natural England—English Nature or the Nature Conservancy Council as was—for 30 years. I was involved at that time with setting up the ancient woodland inventories. A lot of my research more recently has been looking at changes in Wytham Woods, which is a mixture of ancient and recent woodland.

Q2 Chair: Brilliant. I have to say, Dr Kirby, you look exactly like I would hope a visiting professor from the University of Oxford studying woodland would. I am thrilled with your appearance on this Committee and obviously we have an excellent panel to take us through these issues. Can I start with you, Dr Kirby, as a scene setter? Can you just explain, for the benefit of those watching, why ancient woodland is unique and why it is so important?

Dr Kirby: Ancient woodlands are normally defined as woods that have existed since at least 1600 in England. They are the richest in terms of biodiversity. They have a long cultural history because they have almost all been managed and part of local communities for that time. They are often fantastically beautiful as well.

The key thing is that there are various features of them—a lot of the species, some of the soil characteristics, some of the structures that are found in them—that are rarely found in woods that have developed in the last century or so. In the late 1970s, which was a rather different time, about 500 hectares or so a year of woods were commonly being cleared



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for agricultural purposes, and many others were being cleared and replanted with coniferous crops. We wanted a way of, in a sense, having an alert system that would say, "This wood is somewhat special, and do not just nod it through and let it go under the plough or under a blanket of Norway spruce." That was what initiated the development of the ancient woodland inventories.

Q3 **Chair:** Mr Phillips, can you talk us through the current state of ancient woodland in England and how it is identified?

Nick Phillips: Even though it is so important, only about 2.8% of England is ancient woodland currently. In terms of its condition, there is not a specific dataset just for ancient woodland, but we do have something called the national forest inventory, which looks at native woodland condition as a whole. That showed that only 9% of our native woods are in good ecological condition—that means they are healthy—and it is quite likely that ancient woodlands are quite similar in terms of health.

When we talk about ancient woodlands, there are two main categories. There is intact ancient semi-natural woodland, and there is also something called plantation on ancient woodland sites. Those in the latter category are still ancient woodlands, but during the '50s and '60s, quite large areas of ancient woodland were converted into timber plantations. That was because, back then, there was a real need for more timber. There was a big drive after the world wars for more wood. This was not done with bad intentions; back then, the value of ancient woodland was not fully recognised. We now have an inheritance effectively: about 40% of our overall ancient woodland is what is known as plantation on ancient woodland sites, but I think the really key point is that it is still ancient woodland and it is still irreplaceable; it is just damaged.

Q4 **Chair:** Do you think that different definition is helpful, or is it in danger of muddying the waters and confusing things?

Nick Phillips: I think it really is important. For policy, for grants, for regulation and for rules, it is really important that we have these different categories. For grants, for example, there are very specific grants required for these damaged plantation on ancient woodland sites, and if we did not have a clear inventory of where they were, it would be quite hard to enable those landowners to apply.

These rules sometimes can seem quite arbitrary, in terms of our having to define ancient woodland in quite a simple way, but the importance of that is it then allows you to put protections on them and incentivise landowners in the right way. If we do not know where they are, it is very hard for Government to design systems and guardrails around them to ensure they are cared for.

Q5 **Chair:** Ms Flach, in terms of how Britain's ancient woodland is currently being cared for, what would you say about the current standard of stewardship and the state that it is in right now?



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Katharine Flach: I am not sure I am best qualified to say about their state. I can talk about how they are recognised, but I think I would pass that question over.

Chair: Okay, if you answer about how it is defined, we will then go back to Mr Phillips for that one.

Katharine Flach: For the ancient woodland inventory, which is the list and maps of the ancient woodland sites, that is designed from old maps going back from OS Epoch 1 maps, and traces them back towards the 1600s as far as can be shown or defined that they are woodlands. They often trace back prior to that as well, because many of these ancient woodland sites show up in estate maps predating the 1600s.

Q6 **Chair:** Thank you; we will explore that in more detail in a moment. Mr Phillips, we will go back to that previous question: how is ancient woodland in England being cared for? What is the health of the estate?

Nick Phillips: It is a mixed picture, but in terms of where we need to be right now to ensure that ancient woodland has a future, it is incredibly daunting, because we have not got very much of it left.

Some of the surveys that look at native woodland conditions as a whole point quite clearly to some of the key threats and reasons for their poor health. They have gone through quite a change in terms of their management over history; they were quite intensively managed in the past, and we are now in a period when large areas of ancient woodland are not managed for anything, be that for timber, wildlife or access.

Woodlands are incredibly complex habitats, and the thing that makes them so special is the diversity—with dead wood and ancient trees—and these incredibly complex, but vital and irreplaceable, relationships between all of the nature within those woods. As they have become more simple and they have not been managed, those woodlands have become less structurally diverse.

In terms of Government, England probably has the best targets of all four countries in terms of ancient woodland restoration. They are really ambitious: to bring the majority into restoration by 2030. But in terms of progress, I would struggle to think of a worse-performing environmental target. It is tricky because the data on how much ancient woodlands are being brought into restoration is not fully there, but the data we do have suggests that we are probably around the 1% mark in terms of contribution to the overall targets.

For example, what has been publicly reported on plantation on ancient woodland sites—we know those are some of the most at risk—is that, one year, I think about three years ago, it was about 6 hectares in the whole of England in private ownership; the year after that, it was 1 hectare. That is one football pitch. We need it to be closer to about 5,000 hectares each year to meet the Government's targets. I think it is fair to say, though, that it is well known that that data is not fully accurate; it is likely that we are restoring more across England, but we are nowhere near the target.



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These are our most important ancient woods, and we are probably the generation that will decide their future. We are doing some great things on tree planting, but if we are not caring for the most important woods we already have, that suggests we have not got the policy quite right.

- Q7 **Carla Denyer:** I am going to drill down into definitions before we move on from this topic entirely. The Committee has heard that it can be quite difficult to demonstrate that woodland sites date back to 1600 because of the quality of the maps. I understand that Natural England has proposed it could be worth granting equivalent permissions to younger woods, those from 1893. A science question first: how old does a wood have to be to develop the distinctive features that we are discussing? Is there a substantial ecological difference between a wood from 1600 and a wood from, say, 1850?

Dr Kirby: It depends. Any wood can start to acquire species quite quickly, depending on its size, its location and how it is being treated. There are woods that we know, from clear map evidence, did not exist before 1800 but that nevertheless contain species that we would normally associate with much older woods, particularly if they have grown up on unimproved meadows. That is not necessarily where we would want new woodland now, but in the past that happened and some of the species carried over into the woods, so they can acquire them.

It depends also on where you are in the country. In most of lowland England—eastern England, East Anglia and through to southern Yorkshire—the woods tend to be isolated in fairly intensive farmland. In those circumstances, if a new woodland develops it is unlikely that many specialist species will move in. If a new woodland develops somewhere such as the weald, where you have lots of ancient woodland and ancient hedges all around, it is quite likely that some of those species will move in quite quickly. You can show that, on average, ancient woodlands are richer and have more of the rarer species than recent woodlands, but there is a zone of overlap.

- Q8 **Carla Denyer:** That is helpful. May I have the views of the panel on Natural England's proposal to grant the same protections to younger woods—those from 1893, as they suggest?

Katharine Flach: I can see why it would wish to. I imagine it gets a lot of pushback from developers when there is poorer evidence for a woodland. I would say that you can date most ancient woodlands to older than the date Natural England is suggesting, and quite regularly back to at least 1700. Of the woods that I gave back to Natural England saying that they were ancient woodland, I was unhappy with the level of precise ancient woodland characteristics and mapping evidence in less than 2% of cases; besides that, I would say that those things were actually quite well demonstrable.

I agree with what the professor said, in that there is certainly an overlap. Some older non-ancient woodlands do have a lot of ancient woodland characteristics but the historical, archaeological and social ancient



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woodland characteristics are also important, and not found in later plantations and later naturally occurring woodlands. I would be concerned that expanding the definition of “ancient woodland” to include later woodlands might decrease the perceived value of the ancient woodlands that date to 1600 and prior.

Nick Phillips: I would view it as almost a hierarchy where we need to protect a whole range of woodland types, but it should be based on their value. The key thing is that ancient woodland is totally irreplaceable, so once it is gone, there is no policy or grant that will bring it back. From a policy point of view, it is sensible to put the greatest protection on it.

The key thing to remember with ancient woodland is that a lot of species can move, in some cases, as far as this desk. Unlike some of the bird species, a lot of species are highly immobile. It is not just about the species; it is about the complex relationships that they have built up with each other, which you cannot just recreate. Although we might get some species colonising the newer woodlands, they will never replicate the ancient woodlands. I would see it as a hierarchy in which we should have protection for long-established woodland, but ultimately, we should have the top protection for ancient woodland—currently, it does not even have that.

Q9 **Sojan Joseph:** We are discussing ancient woodland as if it were all one thing. Can the panel explain what the common features of ancient woodlands are? We know that ancient woodlands are hugely beneficial for the environment. Do the size, the location and the management of the woodlands make any difference to their environmental impact?

Dr Kirby: Yes, very much so. They tend to have particular structures often associated with their past management.

Woods will often have been managed as coppice, where trees were cut very regularly on a 20 to 30-year timescale and then allowed to regrow from stumps.

Other factors, such as size, are important. The bigger any woodland is, the more likely it is to contain a wider range of species and more species—that is particularly true for ancient woods.

In terms of where they are in the country, there are some woods that are naturally poorer than others because of the nature of the soils. If you were looking at a wood in Cumbria that has acid rocks, you would not expect the same range of species that you would find in a boulder clay wood in East Anglia. They would have different species—so, there would still be the characteristic species, but only a limited number of them.

Nick Phillips: A good point to flag on ancient woodland is that there is a perception that they are dominated by ancient trees, but the level of ancient trees within ancient woodlands can be quite low. That is because they have been managed quite heavily in the past, and they still are in some cases.



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The thing that makes them so important and special, as I keep coming back to, is the relationship between the whole wood. It is about seeing the wood for the trees—that is a bit of an overused phrase. A lot of the carbon and most of the biodiversity is in the soil. Traditionally, policy and science evidence has focused just on the tree element, so if we are truly going to value ancient woodlands, it is really important that we are now realising more widely that often the soil beneath your feet is the most irreplaceable bit.

I will also give you a flavour of the size of the sites. About 40% of ancient woodlands are plantations on ancient woodland sites. Of those plantation sites, about 50% are smaller than three and a half football pitches in size—so less than 3.5 hectares. Quite a lot of it is quite small and fragmented, but we are doing a lot of woodland creation and tree planting now, so there is a real opportunity for policy to join the dots where we want to try to buffer, make them bigger and connect them up. That is good for resilience and for the species. From a policy point of view, it is really important that we do not lose any more, even though it is still quite fragmented.

Q10 Dr Savage: Mr Phillips, I would like to direct this question at you first, because it follows on quite well from what you have just been saying, but I would also very much welcome the input of the other panellists. You mentioned that a lot of the biodiversity of a wood is in the soil. I realise there are a lot of other variables, such as how well it has been managed, but are there broad-brushstroke generalisations that can be made about how the ecological benefits of plantations on ancient woodland sites compare to actual ancient and semi-natural woodland?

Nick Phillips: They are both types of ancient woodland. Both will have irreplaceable features that make them ancient woodland, such as ancient trees, veteran trees, deadwood and some types of soil fungi—there will be things that you cannot repeat—but I would view plantation and ancient woodland sites as damaged and degraded, in many cases.

In England there are two main species or types of tree: non-native conifers are often planted, but equally a lot of broad-leaved plantation was created, particularly in places like the south-east. The biodiversity on those sites is quite dependent on the management. Some sites still have quite a lot of conifer on them, but they have been managed by continuous cover forestry, which is a type of forestry system whereby you effectively maintain a canopy of trees.

There are other sites that are more typical of forestry in the UK, where you clear fell the site and then replant. That is incredibly damaging from an ancient woodland point of view. Those are the ones that I would say are probably the most at risk, first, because every time you clear fell, you are exposing the whole ecosystem, which is used to being under trees, not suddenly exposed to the summer temperatures we are getting now. Secondly, once that plantation has grown up, if you go into one of these sites, you see that in some cases it is incredibly dark. Those communities are used to deciduous trees—trees that drop their leaves—and suddenly

they are not getting those seasons at all, so the ecology of the wood is breaking down.

We have shown on parts of our estate, and many large estates and landowners, including Forestry England, have shown, that you can bring these sites back. It takes time. It is not about getting rid of the non-native trees as quickly as you can; that used to be how people thought it was done, but actually they showed that if you change the site too quickly, you have this ecosystem that is already damaged and unhealthy, and you are suddenly exposing it to light and so on. I would say there is a rush to start restoration but not a rush to finish.

Katharine Flach: I would second what has been said, and point out that a lot of the species and characteristics of ancient woodland have thrived for centuries under the management styles of the past—things like coppicing smaller sections of the woodland—which is why clear felling and replanting is damaging to them.

Dr Kirby: The key is how much the soil is disturbed. The clear felling of a few hectares, even a few tens of hectares at times, if it is done carefully and with extraction, and without too much soil disturbance, may in some cases be mimicking the past coppice management. Equally, quite small fells, but with heavy disturbance through extraction, can be damaging. It is the level of damage associated with the felling that is important.

Dr Savage: Got it. Thank you very much indeed.

Q11 **Olivia Blake:** It would be really helpful for the Committee to get a fuller understanding of the threats to ancient woodlands. Could each of you be as comprehensive as possible on the threats that ancient woodlands face?

Nick Phillips: Whenever I try to list the threats to ancient woodland, I could talk for a long time. Unfortunately, whenever we seem to have come up with a list, another one is added. The list is quite long and is evolving. One of the big threats for all woodlands, but particularly ancient woodlands, is deer populations and over-browsing by deer. We have native deer species, but non-native species have been introduced. They would have had natural predators, but those natural predators are no longer here, so we see large populations of deer growing, which effectively prevents the wood from regenerating. Deer also browse off some of the woodland flora.

There is both a lack of management and inappropriate management—we see both ends of the spectrum. I think that is, in some cases, because of the lack of markets, grants and guiderails—the rules and regulations—to drive the right activity. That is a key challenge.

On pest and disease, ash dieback will be very familiar and has a huge impact on our woodlands. Looking at some of the graphs, the level of pests and diseases that are coming into the UK is accelerating. Pollution is another one, particularly nitrogen. These soils are really delicate. Suddenly, they are getting more nitrogen coming into them from outside the system, which is changing the ecology of the wood. Our ancient



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woodland soils are one of the few soils we have that have not had heavy application of fertiliser, pesticides and so on. Although they are not necessarily untouched, they are a lot more protected than some agricultural soil. That is another key threat.

Development is another one. The Woodland Trust is constantly dealing with threats to ancient woodland from planning applications. This is a cause rather than a threat, but being quite small in size means that they are more at risk from threats. The bigger the buffer you can put around an ancient woodland through planting more trees and allowing trees to generate naturally, the more likely that it will be able to deal with some of those pressures. It all sounds quite doom and gloom, but the solution for some of that is quite similar. It is about proving the health of that woodland so that it can deal with both the known and unknown threats. Particularly, we need more appropriate management. That is one of the priorities.

Katharine Flach: I would second all of that. Fragmentation, edge effects, poor management and pests were certainly on my list, and development too. Another one I would add would be the level of enforcement of the protections to ancient woodlands. There are some that, even without developmental permissions, may have been damaged or removed without that being developmentally permitted.

Dr Kirby: I would reinforce particularly the inappropriate management and lack of management, because that is affecting probably the largest area both of ancient semi-natural woodlands and the plantations on ancient woodland sites. I would also flag that, increasingly, we are seeing effects of climate change: more extreme storms, which will take out a lot of the really ancient trees in the countryside, and spring droughts leading to death and disease and more vulnerability to disease. We are not quite sure what the rainfall effects are, but we know that if you get very wet soils, the trees are more vulnerable to being blown over. A combination of wet autumns and spring gales is probably a bad combination.

Q12 **Olivia Blake:** What is the viability of habitat translocation as a solution to the threats you just outlined? There is a bit of scepticism out there about whether that is viable. What is your view on that?

Dr Kirby: It is not an answer. If, despite the planning guidance, an area of ancient woodland is to be destroyed, you can try to rescue bits from the wreckage. That is worth doing—it is better than not doing anything—but it should not be part of the decision on whether or not that woodland should be destroyed in the first place.

Q13 **Olivia Blake:** That is very clear. Mr Phillips, I am interested in the PAWS we have been discussing. What level does it have to get to for the Woodland Trust to be satisfied that it is restored? Obviously, restoration is the ambition, but it would be useful for us to know what level of input needs to be there.

Nick Phillips: In a way, there are two parts. There is a level of measurement for policy, which always has to be relatively simple, because



if it is too complicated, it would be hard to measure at a national level. That is often based around native tree cover. In terms of on site, we would say that that does not go far enough. It is a slightly challenging one, but effectively it is about improving the ecological condition of the wood. There are some really good tools out there. The Forestry Commission has developed a tool called the woodland ecological condition assessment. Effectively, it allows you to show the health of your wood over time. We would like to see tools like that used to show that those sites are effectively getting to the point that they are healthy. Ultimately, in terms of when restoration is finished, if we were advising a landowner, we would say that this is an ongoing process, because with climate change, other changes and deer populations, it is always an ongoing job—it is never finished—but the policy is often based on the native canopy cover, just for simplicity, even though in ecology terms, we need to go much deeper than that.

- Q14 Olivia Blake:** On other risks—right of access, right to roam and access to nature, which have all been kind of discussed—would you see any of those in conflict with protecting these important habitats?

Nick Phillips: We are in a period when people are becoming increasingly disconnected from nature, but I know how I value nature for my own mental health and personal benefit. It would be a real shame if we got to a position of saying that people cannot access and enjoy the woodlands. A lot of these ancient woodlands are in quite urban areas, sometimes in areas with a lot of poverty, but it is about responsible access. We manage a large estate and a large part of our management of the estate is about dealing with littering, sometimes, or possibly inappropriate use or vandalism. There are two sides to it, but I would say that access absolutely needs to be supported. Access to woodlands and ancient woodlands is critical, but it needs to be managed, and sometimes that can cost money for organisations, for signage, having staff to monitor sites and check that fires are not being lit, and so on. It is incredibly important that we do not put a fence around the woodlands. I think that would be a mistake.

- Q15 Olivia Blake:** You mentioned buffer zones. How big would a buffer zone have to be to protect from the nitrogen pollution that you mentioned? I wanted a bit more understanding of how far that would have to go to be effective. I can imagine a policy being written for 20 metres or three miles, so what scale are we talking about—or is it specific to the sites?

Dr Kirby: It is variable, and it depends on what level of impact you can detect. Some studies have detected impacts 100 metres or 50 metres into a woodland, but probably a lot of the impact could be offset by 20 or 25 metres.

- Q16 Olivia Blake:** That is very helpful. Is there enough national guidance on such areas at the moment, or should we as a Committee be asking for more robust policies?

Dr Kirby: It probably needs a bit more research. Sorry, I would say that!

Q17 Chair: Do you know anyone who could do this research?

Dr Kirby: Not me! I think it would be good to have more research on, in particular—if we have just grass, not a lot is stopping the nitrogen coming in—whether we could develop dense foliage, which might well mean that we can use narrower buffers.

Nick Phillips: I totally hear what Keith is saying, but I think I would probably be pushed into taking a precautionary principle, because we might not have the time in some cases of these ancient woodlands. He is totally right that it depends on the impact, but there have been some good discussions between the Forestry Commission, Natural England and the Woodland Trust, almost on what buffers to put in under the precautionary principle. That is not perfect, but it would be better than what we have now, until we have the evidence to replace the suggestion. If I could take an action, I am happy to feed in to the Committee the evidence from colleagues who are working on that, on what the latest is on that, because they have had some good discussions and some recommendations on the buffer.

Q18 Olivia Blake: That would be very helpful. I have a final question on animal management, which you mentioned. It is quite a controversial issue with deer, I am sure, but is there a set of policies that would enable better animal management that you would like to see us recommending?

Nick Phillips: With deer management, one of the biggest challenges is getting landowners to co-operate and work together. In some cases, woodlands are very small—there might be 30 or 40 landowners in a relatively small area. Government have just produced an updated deer policy statement, which we really welcomed.

It would be really helpful to look at Scotland as the model. Scotland has commissioned an evidence review on what legislative changes are needed to get deer management going. Some of the challenge with deer management is that there is only so much you can do with carrots in terms of supporting people to work together. *[Laughter.]* I should be clear that I mean incentives.

There is an argument for regulatory reform; change is needed. Scotland has made some quite radical changes here. I think it would be good for the Government in England to commission the same type of evidence review. We are at a good place in terms of the policy statement they have put out, but it would be good to look at the legislative side as well.

Olivia Blake: Are there any other views on that?

Dr Kirby: Encourage people to eat more venison.

Olivia Blake: Very good. Thank you.

Chair: It is a recommendation we can all get behind. There are a few Members wanting to come in with brief questions. I will go to Barry first.

Q19 Barry Gardiner: Dr Kirby, you spoke of wet soils and spring gales being



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probably a bad combination, and we understand that there are edge effects on woodland. What difference does the size of the woodland make to its ability to withstand those wet soils and spring gales?

Dr Kirby: The smaller the wood, obviously, the bigger the edge area. Edge trees actually are often a bit more stable than those in the middle, because they have been exposed to the winds before, which is why in '87, you often got the halo of trees standing in the middle blown out.

The other edge effect is that you get a drying out of the areas and loss of humidity at the edges of the woods. That can be particularly damaging for some of the more specialist lichens and bryophytes—mosses and liverworts—in the west of the country, which are dependent on not necessarily wet soils but a very humid microclimate. The smaller woods will have a bigger edge area.

Q20 **Barry Gardiner:** And a bigger propensity for damage. What can or should be done to protect those smaller woodland areas? Is there a way of trying to insulate them against those wet soils and spring gales?

Dr Kirby: As I think Nick mentioned earlier, targeting some of the new woodland around small patches to increase their size would be a very good way of using some of the new planting.

Q21 **Barry Gardiner:** Thank you very much. Mr Phillips, could I say “wolves” to you?

Nick Phillips: It is certainly something that is being discussed in a Scotland context. There is a really important place for bringing back natural processes—basically, the bits of the system that we have removed. That is why we are having to do so much intervention into woodlands. As well as expanding the level of trees around woodlands to buffer them, improving the condition of that small patch would be one of the best security policies, because we do not know what change is going to happen. The weather is taking everybody by surprise—some of the predictions we had are now changing—so one of the best things we can do for our ancient woodlands is buffering them, increasing the patch size, thinking about connectivity between those areas and improving the health of the patches that we already have.

Barry Gardiner: Hunting comes back once again.

Nick Phillips: Exactly.

Q22 **Barry Gardiner:** Our colleagues in Europe have lived with wolves as top predators quite amicably for many years, have they not?

Nick Phillips: Yes. Various different species are being considered—the beaver is another one; we already have some good examples of where they are effectively doing the woodland management we are talking about for us in some sites. From a policy point of view, I would maybe like more focus on the species that are not so charismatic. I am thinking about some of the species in woodlands that we know so little about—it is an area of science that we do not know well, although we know enough. We are



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learning more about the soil biodiversity and how it totally underpins the health of the woodland and the carbon in all habitats, and of course farmland, but we know very little about it, which really worries me. I would like to see that as a priority, to get a handle on it.

- Q23 **Jonathan Davies:** I have an ancient woodland site in my constituency: Chaddesden wood, which is the only ancient woodland in the city of Derby. It is a nine-hectare site that supports a rich cross-section of biodiversity, but it is, or has been, at risk from development. I did not want to miss the opportunity to speak to experts about that, although I appreciate that this is not the part of the meeting for my questions. Is there enough protection within the NPPF to make sure that those buffer zones are retained? If so, how do we articulate the need for that to be more robust not only to Government but to local authorities, which are often between a rock and a hard place when it comes to housing development?

Nick Phillips: I would probably use three words to describe the policy at the moment: inconsistent, insufficient and disconnected. I will explain those. It is inconsistent, in that we have a policy that says that development impacting ancient woodland should be rejected unless there are wholly exceptional reasons that it should not be, but interpretations of that at the local authority level are radically different. That is not helpful because we are effectively seeing planning cases being improved when they should not be because of differences in interpretation.

It is insufficient, in that despite what is supposed to be strong protection, we still see quite a lot of decisions on ancient woodlands going the wrong way.

And it is disconnected, in that the way we protect ancient woodlands is in boxes. We have some protection from development in one place, a little protection from inappropriate management in forestry somewhere else, and nothing really in the middle. It would be great if we had a more coherent policy and regulation structure that brought that together. With development, it is often viewed as being about not damaging ancient woodland, rather than about incorporating it into development and how development could actually benefit the ancient woodland. There could be real scope for nature-positive development, rather than it purely being about the harm side.

- Q24 **Jonathan Davies:** Is there enough synergy between the environmental improvement plan and the NPPF, or are they diametrically opposed on this?

Nick Phillips: There are a lot of contradictions between the two. It would be a real opportunity to see nature as a positive part of development, rather than as something that is in the way. So there is a real opportunity there.

You can see how much communities benefit from woodlands. In the year of the heatwave, it was not a surprise to see most of my local community in areas that were cool, which happened to be their local green spaces and woodlands—those were significantly cooler. People really appreciate that.



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If we are going to establish developments in communities, we should think about giving them the same access to those types of places, too. The short answer is that I do not think that there is.

- Q25 **Sammy Wilson:** Professor Kirby, I think you mentioned that the biggest threat to woodland is either lack of management or over-management, and that if woodlands are to be preserved, they need appropriate management. Could you give the Committee some idea of what is meant by “appropriate management” of woodlands? Is the biggest impediment to that the economics, as that kind of management sometimes does not produce much revenue?

Dr Kirby: What is appropriate is, in a sense, site-specific: it is about looking at the wood and what its features are, and then at how they will be affected by different types of management. It is not necessarily about trying to have one system that will definitely fit all circumstances. It will generally mean less intensive and smaller-scale working. You are right that that will often be more expensive, so we need to support systems that recognise that.

It may also mean, if we are using native species and they have broad leaves, that we need to recognise that this will probably mean lower production levels, in terms of volume and to some extent biomass and carbon as well. Again, we need to work out if there are ways in which the owner can be recompensed for accepting that lower production. It also perhaps means that, in some cases, you might have what would be ideal biodiversity management but then accepting that we cannot afford that and will need to go for a mix of some production—but maybe not as much as would give you the best returns.

In a lot of cases, these woods have survived because they were managed in the past. That is why under-management can now be a problem, because a lot of the species were used to the woods being opened up periodically, and now they have not had any felling in them for 60-odd years. We need to find the sweet spot in the middle. It is about getting the woods cared for—and I would actually use that term rather than “protected” in a lot of circumstances. Often, the owners are the people who are best placed to do that and to know what is important. They usually do know their sites.

- Q26 **John Whitby:** Doctor Kirby, you mentioned carbon. The Committee has heard conflicting evidence on the role of ancient woodland in carbon sequestration. Do ancient woodlands continue to generate a net reduction in greenhouse gases over time?

Dr Kirby: Yes. As Nick said earlier, most of the crops on the ground in ancient woodland are not necessarily that old. A lot of the woods were felled during the second world war. Large areas of the woods in Wytham, where I work, were felled. Most of the trees there are no more than 80 years old. That is fairly typical of ancient woodlands across the country. They are still in quite a rapidly growing state and will continue for probably another hundred years or so if they are just left.



There are some caveats. That assumes that we are not harvesting, so then there is the trade-off with potential economic returns. There is also a trade-off in that we would like some of these woods more opened up for biodiversity. In that case, you are then felling and reducing your carbon there. One thing that is uncertain is the impact of things such as ash dieback. In Wytham, ash is 25% of the canopy. It has been the fastest growing tree, and it is now dying. We are in the process of trying to work out exactly what that is going to mean for the carbon budget of that particular wood. It probably will not turn the wood into a source of carbon, but it will certainly reduce the degree to which it is taking up carbon.

Q27 John Whitby: Do ancient trees actually stop sequestering carbon at any point, or do they always sequester something?

Dr Kirby: As long as it has a full canopy, it will be sequestering carbon at a very fast rate. As they start to retrench, the net sequestration will start to decline.

Nick Phillips: One of the key things with ancient woodland is that they are, as Keith says, still sequestering, but the biggest thing is the carbon that they are capturing. When you look at carbon policy, it is very focused just on trees, but 80% of the carbon is in the soil. If we really want to look at the woodland ecosystem, we need to look at the whole wood, and that is a radically different picture.

The other key point about ancient woodlands is that carbon is almost like a co-benefit—it is a benefit we get. It would be a mistake to try to maximise carbon, for a couple of reasons. First, it would potentially damage or degrade the irreplaceable parts of ancient woodland. Secondly, in doing woodland management, you are improving the health of the wood, so even if you are having a small carbon impact, you are protecting the overall far bigger carbon store in the longer term. In any scenario, they are incredibly important for carbon, but their true value is all the other values added together, which is irreplaceable—that is the bit we cannot get back.

Q28 John Whitby: It is fair to say that the newer growth is where the majority of the sequestration is from. We heard concerns about the impact of significant replanting on ancient woodland sites. Is there a tension? Is it possible to balance that tension?

Nick Phillips: I think this could be really positive in many cases. A lot of the plantation ancient woodland sites are not managed for anything at the moment—they are not managed for nature or timber production.

When you are doing the restoration, because you are doing it quite slowly, it often goes into quite local wood markets. We have a situation in Devon where the restoration that we are doing involves the conifers coming off site and going into the timber market. They would do that in any case, even if it were not being restored, but because that is quite a slow restoration, it is able to support a lot more local businesses. Traditionally, you would just chop the whole lot down, and there is no way that small local wood businesses would be able to cope with all that wood at once.

There is a potential win-win-win here. It could be positive for nature and local jobs, and if you have the timber locked up in long-lived products—in construction or furniture—it could be positive for carbon as well. The answer is always that it depends on how it is managed and what happens, but I do not think there is a tension there. In any case, they cover such a small area of the UK, and our focus really should be on the irreplaceable bits of protection.

Q29 John Whitby: Is there a difference between PAWS and ASNW in terms of carbon storage and sequestration?

Dr Kirby: It depends on which bits of it you are measuring. If you are harvesting some of the trees in the ancient semi-natural woodland and then it goes for firewood, that is not a long-term store in that sense. But as long as they are still growing fast, they will be sequestering them.

Q30 Chair: Ms Flach, you talked earlier about some of the ancient woodlands that have been lost through planning applications, and you talked about enforcement. From your experience, when they are lost, is that due to a lack of expertise in local authorities? If it is not local authorities, who should be enforcing the protection of ancient woodlands or ancient trees when they are lost? If it is not a lack of expertise or a lack of resources, can you give us a sense of the causes, in terms of enforcement, of why these ancient woodlands or parts of ancient woodlands are lost?

Katharine Flach: The example I was thinking of at the time was when updating the inventory. It was a surprise to Natural England that a particular area of ancient woodland had been mostly cleared for a golf course. We passed that on to Natural England. Perhaps it had been allowed—I did not look into the local authority planning applications—but there should be a joined-up approach, whereby the people who know the most about ancient woodlands and the irreplaceability of the habitat are involved in the development decisions, so that the correct ones can be made and they are not lost without a true understanding of the habitat.

Q31 Chair: Mr Phillips, you were talking about the inconsistency of the way that planning policy is implemented across different local authorities. Again, do you think that is down to an inconsistency in the knowledge of those local authorities? Is there a deliberate policy of being more generous or less generous in different areas?

Nick Phillips: It is probably a mix of things. There are policy changes that could help. Sometimes it is the expertise and access to expertise in local authorities that is so important to support that. Common, clear guidance helps. Where there are options for interpretation in planning policy, you will get different interpretations. We would like to see support for local authorities. Often they do not have huge amounts of capacity, but often have quite high workloads. Access to expertise and reviewing the national planning policy framework would help in terms of how “wholly exceptional” is interpreted. That should be the only place where ancient woodland cases are approved.

Chair: We are coming to the end of this first panel session. Barry Gardiner



has the final question.

- Q32 **Barry Gardiner:** Dr Kirby, Mr Phillips talked about the importance of soil for sequestration. There is one thing we have not touched on that I want to ask about: do ancient woodlands have distinctive mycorrhizal networks? How important are they for the strength and survival of those woodlands?

Dr Kirby: In so far as we know, they do have distinct fungal communities, and those are almost certainly key to some of the relationships within the woodland. It is an area that is rapidly expanding with the ability to identify species through environmental DNA. They are critical. It is probably one of the reasons why new woodland takes a long time to acquire some of the distinctive characteristics. The soils are impoverished in terms of their fungal communities and their different types of fungal community, and it will take time before those build up.

- Q33 **Barry Gardiner:** More research is required there, too, is it?

Dr Kirby: Undoubtedly, but it is going on.

Barry Gardiner: Thank you.

- Q34 **Chair:** Finally, can you talk us through the role of local environmental record centres in providing the expertise about what is actually there?

Katharine Flach: Yes. Developers are encouraged by local authorities to contact environmental record centres for the most up-to-date and accurate data on habitats as well as species and protected sites. While the ancient woodland inventory is freely available, other protected sites and habitats are accessed through local environmental record centres—I am not sure that I remember the rest of the question.

- Q35 **Chair:** It was just basically explaining their role in keeping those records and how they are utilised within the process.

Katharine Flach: It is a large amount of data. It is important to have specific and non-biased scientific and data professionals working on managing and making sure accurate data is available for everyone.

- Q36 **Chair:** Developers are encouraged to utilise these facilities. If they do not, is there a danger that that information is not considered when it should be?

Katharine Flach: Yes. There are some available national datasets. They are similar but generally less locally accurate; the benefit of environmental record centres is that they have the local knowledge and local expertise.

Chair: Brilliant. Thank you to all three of you for that excellent session. We will bring this panel to a close.