HOUSE OF COMMONS

Environment, Food and Rural Affairs Committee

Oral evidence: Avian Influenza, HC 890

Tuesday 29 November 2022

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Watch the meeting

Members present: Sir Robert Goodwill (Chair); Steven Bonnar; Ian Byrne; Geraint Davies; Rosie Duffield; Barry Gardiner; Dr Neil Hudson; Robbie Moore; Julian Sturdy; Derek Thomas.

Questions 1 - 96

Witnesses

I: Richard Griffiths, Chief Executive, British Poultry Council; Paul Kelly, Managing Director, Kelly Turkeys; and James Pearce-Higgins, Director of Science, British Trust for Ornithology.

II: Christine Middlemiss, Chief Veterinary Officer, Department for Environment, Food and Rural Affairs; and David Holdsworth, Chief Executive, Animal and Plant Health Agency.

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]

Examination of witnesses

Witnesses: Richard Griffiths, Paul Kelly and James Pearce-Higgins.

Q1 **Chair:** Welcome to this special hearing of the EFRA Select Committee, where we are doing an in-depth investigation into the current avian influenza epidemic. I think "epidemic" is probably a good word to use; certainly among wildlife it is an epidemic. I am very pleased to welcome our first panel. Could you introduce yourselves and your organisations?

Richard Griffiths: I am the chief executive of the British Poultry Council, the trade association for poultry meat producers.

Paul Kelly: I am the managing director of Kelly Turkeys. We are turkey breeders and Christmas turkey producers in Chelmsford, Essex.

James Pearce-Higgins: I am Director of Science at the British Trust for Ornithology.

Q2 **Chair:** My questions will be more applicable to Richard Griffiths and Paul Kelly. How is the current outbreak of avian flu affecting the livelihoods of poultry farmers in the UK? Maybe Richard Griffiths first and then Paul Kelly can tell us about his personal experience.

Richard Griffiths: As the Committee well knows, this season, this year, is the worst bird flu outbreak we have ever seen. Since the beginning of October, we have had over 130 cases, possibly nearer 140 now. When you consider that in previous years getting to double figures was a bad thing—

Q3 **Chair:** How does that equate to the number of birds?

Richard Griffiths: There are a couple of different measures. Currently, as of 20 November, around 1.4 million turkeys have been culled directly because of bird flu on farms. The current DEFRA estimate is that, given the control zones and controls that have been put in place, around 36% of poultry farms in the country are covered by some form of control, whether they have been directly affected or not. It is huge and the on-costs for the industry and food production are potentially enormous.

Paul Kelly: Richard Griffiths has outlined the national situation. For farmers, it has been devastating. As a hatchery business, we supply lots of farmers throughout the country so I get first-hand knowledge of when their premises are infected. We have had three infected premises. The challenge for a lot of the smaller seasonal producers that produce Christmas poultry is that they have their Christmas flock on their farm and when it is infected, the turkeys all die within four days. The current compensation scheme goes back to the Animal Health Act 1981. That is the legislation that runs around it. That is from when avian influenza was low-path, when it did not kill the poultry.

The problem now is that it has turned into high-path, but the compensation scheme runs round compensating for poultry that are fit and healthy when they arrive to cull, but unfortunately they are all dead now. To give you an example, we have one farm with 9,500 turkeys. The

first infection was on Thursday evening, 20 mortalities, and by Monday lunchtime they were all dead. It is a very different influenza from what it was 20 years ago.

Chair: We are going to have to pause because a Division has been called in the Commons and therefore we will suspend for 10 minutes. Apologies for that. If we had started on time we could have done that first, but bear with us. We will be back in 10 minutes or so.

Sitting suspended for a Division in the House.

On resuming—

Q4 **Chair:** You were explaining how you had had an outbreak or two on some of your units. Could you explain the chronology exactly, from noticing dead birds to informing APHA? I know there has been a lot of talk about it because it kills the birds so quickly. By the time APHA gets on to the farm, 75% may be dead and you are only compensated, as I understand it, for the live birds, the healthy birds, when it is there.

Paul Kelly: That is exactly right. In the last outbreak we had, we had 9,000 birds on the site, 20 mortalities on the Thursday evening and by the following morning they were dropping like flies. We had reported it that morning. The vet came out that day, took the bloods and the bloods went in. This was a Saturday. The bloods were in and getting tested. By the time they came out—we got the results Monday morning—Monday lunchtime they were all dead anyway. The compensation scheme does revolve around getting paid on fit and healthy birds when APHA arrive to do the cull.

I think it is interesting to know the backstory of that legislation. In the Animal Health Act 1981, when it was written for avian influenza, the strain was low pathogenicity, or low-path, so when they did arrive to kill the birds, there was not that much mortality. So the compensation scheme then was fit for purpose. Now the virus has mutated and is a high-path virus so when they arrive to kill, the birds are all dead.

As farmers, we do not want to rely on compensation schemes. What we want is a vaccine so we can take a normal commercial risk, but at the moment businesses are being wiped out. For the small independent farmers who produce poultry for Christmas or other seasons, in many situations it is the poultry business that is the profitable bit and what keeps them farming. If you unplug it from the farming operation, the whole farm is not viable; it is just part and parcel of the farm. There has been some trauma. I know one guy in Norfolk with a wonderful little business with geese, ducks and turkeys who supplied the local butchers and restaurants. His whole flock has gone and he does not have a business.

Also the challenge at the moment is the cleaning and disinfection rules. As an industry, all farmers want to clean and disinfect to the nth degree and get it right, but there are three options. Option 3, which is where you just rest the site, is for 12 months. Well, 12 months is too long. If a

farmer gets an infection in September, he cannot restock that site until the following September—unless he does this almighty cleanout, which we do have to address because we think it is overkill—and of course the poultry needs to be placed in May and June so he is out of business for two years, not one year. We desperately want to work with APHA to see what we need to do to get those sites clean other than this arbitrary 12 months that is given at the moment.

Chair: Maybe we can ask the vets a little bit about that in the second session. If a person died from covid, there was no virus after 72 hours, we were told.

Paul Kelly: I think I am right in saying that six weeks is how long we think the virus lasts, but we are having to rest the sites for 12 months. We need to do what is right, but I think it needs to be based on science rather than a random 12 months, because that is putting farmers out of business for two years, not one.

Chair: I think Barry Gardiner has a follow-up question about that.

Q5 **Barry Gardiner:** I am very interested, Mr Kelly, in what you said, that previously the reason for that incentive had been almost as a prophylactic to make sure that farmers did have the incentive to cull birds rather than think, "Oh well, I will take the risk" and then find that the infection had spread. At the moment the money is going to the lucky farmer who manages to get inspected right at the beginning before the birds have died, but other sites are getting no compensation because the birds have all gone by that stage. Would one of the recommendations you would want to see come out of this inquiry be that the money that was set aside for that might be better used to help you guys implement biosecurity measures or in some other way, rather than what appears to be a random allocation of resource after it is too late?

Paul Kelly: Yes, that is exactly right. What we would like is, as with foot and mouth, you would be paid on the value of the livestock on the farm, not what is fit and healthy when they come to slaughter because those animals do not die like poultry with avian influenza.

Q6 **Barry Gardiner:** My understanding from what you have said is that previously they were not paying you for the loss so much as in order to prevent further spread of the disease and that is why it was so important that the birds had to be alive at the point of cull. Therefore if the intent is to spend the money to prevent the further spread of the disease, might it be better to spend that money on other more effective preventative measures?

Paul Kelly: In terms of biosecurity, absolutely. That is so important, but it is not the silver bullet. Some units in the UK that have gone down are like hospitals, great-grandparent units where you go in—it is shower in, shower out—and when you get in you are in corridors and never go to the outside world. Yet they have gone down with it, several of them, ones that are like hospitals that are second to none, so while you are mitigating risk with good biosecurity, you are not eliminating the risk. Of

course there are good sites, fantastic sites, and there are always poor sites, but I would say that generally as an industry we have very good biosecurity and we take it very seriously. No farmer wants to get it. It is devastating. Just mentally, it is traumatic for people.

We do our very best and notifying the disease is so important so that we stop the spread. The minute you get a mortality you phone up, get APHA out and get the vet, but the problem at the moment is that the scheme is based on the Animal Health Act 1981. We are a small business and we have lost £1.2 million this year just from turkeys that have died. Luckily, we are going to get through to next year, but I am looking this January at whether we can take the risk to grow Christmas poultry based on what we have seen this year. We couldn't. If I had known before what I know now, our business would have been very different and we would not have grown the turkeys as we did. We would not have grown as many. We would have absolutely de-risked our business, which is the right thing to do.

For next year, I don't want to put the farm at risk and I don't have the confidence to grow and do what we do. My head is in a spin at the moment because without a vaccine in place or a compensation scheme that is fit for purpose—and not just me, I am talking to lots of other customers—I don't know whether we will have the confidence to grow Christmas poultry next year.

Q7 **Chair:** Richard Griffiths, are you concerned that even farmers who have not had avian influenza this year will think carefully before stocking up with Christmas turkeys and geese for next year?

Richard Griffiths: Certainly. This year the seasonal producers have been so badly affected, and I can see many of those taking a long hard look at whether they want to be in Christmas poultry. Free range particularly has been hit very hard. On a broader scale, biosecurity is starting to be mentioned. Emphasising what Paul Kelly said, biosecurity is immensely important. It is a tool in the toolbox and is incredibly important.

Q8 **Geraint Davies:** Can I ask you, Richard, about this Christmas and what the availability of poultry and eggs will look like? You have already said that 36% of farms have been affected and 1.6 million birds have been culled. What does that mean for someone who wants to buy eggs and turkeys and chickens this Christmas?

Richard Griffiths: I cannot speak for eggs, that is not my field, but for turkeys and geese, particularly free range, the usual number of free-range birds grown for Christmas is probably around 1.2 to 1.3 million. We have seen around 600,000 free-range birds directly affected.

Geraint Davies: Half the turkeys for Christmas have already been killed?

Richard Griffiths: Half the free range. The total turkey production in the UK is 8.5 million to 9 million birds.

Geraint Davies: For Christmas?

Richard Griffiths: For Christmas.

Q9 **Geraint Davies:** How many of those have died?

Richard Griffiths: Of Christmas birds, probably just over 1 million have been culled or have died from bird flu.

Q10 **Geraint Davies:** What does that mean for the price of turkeys this Christmas?

Richard Griffiths: I don't know. That is a question for retailers. We do not know how the gaps in retail are going to be filled.

Paul Kelly: I don't think UK turkey prices will be going up. I think it will just be a supply issue rather than prices being hiked. There will be a shortage of free-range British turkeys on the shelves this year.

Q11 **Geraint Davies:** If the major cause of the shortage is the avian flu, to what extent are other factors in play here, rising costs of production and fuel and all the rest of it?

Paul Kelly: I think the numbers of free-range turkeys that were placed were similar to last year, a little bit more, because that is where the growth is, but 600,000 have been killed because of avian influenza. Our main production was for the supermarkets. The suppliers for a lot of the independent butcher trade are the local farmers. If that local farmer is infected, he either can or cannot supply a butcher, so lots of independent butchers will not be selling Christmas poultry this year because they do not have a supplier. Those butchers whose supplies have not been affected will be selling Christmas poultry. The biggest effect has been on the supermarkets.

Q12 **Geraint Davies:** You are both saying that there will be a quite significant impact on the number of turkeys available this Christmas and that you do not envisage there being a significant price increase at a time when food prices are rocketing?

Paul Kelly: The cost of production has gone up about 18%. The wholesale price, the spot price, for imported turkey has doubled, but of course the UK turkey market is very niche. You need a turkey crown or a whole bird of that size. You cannot just dip into the European market and buy that product. It is a very specialist product. The wholesale price of meat has doubled for turkey, yes. Northern Europe is seeing the same problems we are seeing; they are dropping like flies there as well.

Q13 **Geraint Davies:** You said a moment ago that in terms of your own business you would think twice about producing as many turkeys the Christmas after next. Do you have any idea what that might mean for the market in terms of the number of turkeys being produced for next year?

Paul Kelly: As a breeding company, with all the fresh turkey sold at Christmas, our hatchery supplies about 30% of that market, so we are big players in supplying the farmers throughout the country. From my conversations with them, with the ones that have not been infected, they are pretty isolated and insulated, they are concerned but not too concerned. For the ones who have been affected they are thinking that unless they have a vaccine or a compensation scheme that is fit for

purpose in their view, they cannot risk it because they have lost so much money this year that they could not afford to go into next year at the risk of losing it again, because they would probably be bust.

Q14 **Geraint Davies:** Richard, have you done that modelling on how big the market is going to be with or without a vaccine, first this Christmas and then next Christmas?

Richard Griffiths: Paul has covered this Christmas. For next Christmas and subsequent I fear for the free-range production as a whole. I think it may be a drip-feed away from free-range production more towards the indoor production. I cannot see turkey Christmas birds dropping off immensely, so 8.5 million or 9 million birds I can see being maintained, but the style of production may change.

Q15 **Geraint Davies:** Do you have a very strong view on a vaccine as well, as it has been raised?

Richard Griffiths: I do. I am pleased you asked me that. Yes, right from individual producers up through industry level, through European and global producers, there is consensus that vaccination for AI is the path to take and we must overcome the barriers for vaccination. The biggest one of those is trade, as to which countries will and will not accept vaccinated birds, because we all know a bit more about vaccines these days than we did. Vaccination does not stop a bird getting the disease, it just means at a low level, so we need the right controls in place for trade, for confidence in trade. There are a few veterinary, scientific and regulatory hurdles to clear, but we are absolutely clear that vaccination is the path that we, as an industry, want to take.

Chair: We will go to Neil Hudson who, as a vet, knows all about vaccination.

Q16 **Dr Neil Hudson:** I will start by saying that our thoughts are with the farmers, producers, vets, officials and people on the wildlife side of things who are dealing with this crisis as we speak. It is very harrowing and the impacts are huge.

First, before I ask my question on housing, Paul, you touched on it when the Chair asked you about the impact on livelihoods, but I am also very interested to hear briefly from Paul and Richard the human impacts of the avian influenza outbreak. You mentioned foot and mouth and the mental health impacts of that, but can you briefly articulate for the Committee and for the public at large what the impact of this bird virus is on the mental health of people involved in this in any way?

Paul Kelly: As a hatchery business we have farmer customers and a lot of them are very close friends, so they phone me up and they just want to curl up in a ball and cry. They have built this wonderful local business up that is supplying the local butcher. For example, Steve Childerhouse in Norfolk, for 30 years the family has been doing it—geese, ducks, a super little business—and of course you build all that up in the farm gate trade. It has gone all in the space of four days and he cannot see any route back into it for next year because of the stipulations. Some of the case

vets are asking for six inches of topsoil to be stripped off the free range. It is almost impossible to do that. We need to look long and hard at that.

I know what I was like. We are lucky that we have several farms and several sites, so we have not lost our whole business, but you must phone customers up and say, "I am sorry; we cannot supply you". Those customers you have been supplying for years and suddenly it is gone.

Richard Griffiths: The loss of livestock for any farmer is absolutely devastating, from the smaller seasonal producers right up to the larger commercial interests. It is devastating and at a time when we, as the industry, need more people on-farm. We need more farmers and farmworkers; we are struggling with that as well. We do not want to lose anybody, so we must support these people as much as we can.

Q17 **Dr Neil Hudson:** Thank you for articulating that. We are talking about some of the housing requirements that we understand are very important in terms of the biosecurity. James, we will get to you with subsequent questions about the impact on the wild bird population, but to protect the domestic bird population with the mandatory housing requirements, what impact are these housing requirements having on those producers who produce free-range products? It is something that must be done, but what does it mean for people in that production line?

James Pearce-Higgins: There is a very good acceptance of the need for it. I think everybody can see, whether they are indoor producing or those involved in free range, the potential benefits. It is one of the tools in the toolbox. It reduces risk somewhat, not as much as good biosecurity, but it does help and all free-range producers can see the benefits of doing it.

Paul Kelly: I agree. There are no welfare issues with the livestock. As a farmer you do whatever you can do to reduce the risk and by bringing those birds inside you feel happier.

Q18 **Dr Neil Hudson:** Once you have brought them inside there are then logistics in what that means for what the product is labelled as in terms of free range and talking about the period, whether it is 16 weeks and beyond 16 weeks for eggs, the eggs could then be classified as barn eggs. In Europe there are moves and discussions potentially if, under veterinary advice, the birds are being housed that that 16-week period could be prolonged to maintain that classification as free range. Is that something that would have resonance in the UK to keep us on a competitive level playing field with our European allies? Is that something that you have had discussions about that you think the Government needs to look at closely?

Paul Kelly: We communicate with our customers. This year, for example, which is exactly the same—you can relate it to it—we have had to pluck our turkeys early. We did. Every day they were out there on the farm we were at risk, so we plucked our turkeys early and we put them in the fridge and we deep-chilled them. We have communicated that to our customers and they have said, "Fantastic. No problem at all". The birds will be previously frozen. Customers do not have any issues if you explain

it to them and I think that is the same with the free-range eggs. Consumers will understand if the farmers are having problems and have had to bring the hens inside. Of course these problems will be overcome. It is just this window of the next 12 months to 18 months, how we get through that with the vaccination and then we will be back to normal. It is communication.

Q19 **Dr Neil Hudson:** In your sector are you aware of that potential disparity forming between us and Europe?

Richard Griffiths: The 16 weeks is on the egg side of things and of course egg-laying flocks are on the ground for longer than 16 weeks. I can see the problem there and I am very sympathetic to it. For meat birds it is 12 weeks on a flock-by-flock basis, but for the average bird they are not on the ground for more than 12 weeks, so it never really becomes an issue for meat production. It is mainly egg laying.

Q20 **Chair:** Geese do eat a lot of grass. Housing those rather than letting them out, a lot of free-range birds just go outside and they do not eat a great deal when they are out, but geese eat a lot of grass. Would that change the quality?

Richard Griffiths: Geese are probably the most difficult of the poultry birds to house, because they do not particularly like being indoors. They want to be outdoors. There are around 250,000 seasonal geese a year, but even the goose producers, who often produce turkey and duck as well, multispecies, recognise the need for that and they will deal with bringing them indoors. As Paul said, if you lose the birds, you lose the business.

Q21 **Barry Gardiner:** Turning back to biosecurity, could you outline housing the birds, but also the biosecurity controls that have been put in place and how effective each has been? Is there something that is a standout winner and other things that you think do not seem to make much difference?

Richard Griffiths: No, it has to work as a whole. I will stand to be corrected by veterinary colleagues, but I don't think there is one element of biosecurity that is the most important and the most standout to the detriment of others, whether it is the clean area around the concrete strip, the change of boots, the change of clothes, the different tools, the cleansing or the fabric of the buildings. If we were going to pick out one area where we want to see improvement—and we are in lockstep with DEFRA on this—that we are working to improve, it is the fabric of buildings, making sure that there are no means of ingress for vermin, for example. There are areas that we definitely want to work on to improve, but when applying biosecurity, it must be applied holistically.

Paul Kelly: I totally agree. It is not just one thing. The biggest thing for us that we did as a business was every time you go into that shed you run the risk of taking something in, so we just tried to reduce the movements as much as possible and it is one man, one site, change in, change out.

Q22 **Barry Gardiner:** Once you are housing the birds intensively indoors, then the moment infection gets in the spread is going to be immediate and the impact huge. Have any control experiments been done with comparable flocks left outside, where in fact it might be that the infection is slower?

Paul Kelly: Without doubt. The free-range units, the first one that happened in East Anglia, they were out and it got into the geese and they were all out on the range. With geese, as Richard said, you just leave them out in fields and you do not have a building. It takes that farm, that flock, a lot longer to get the infection and all of them to pass away than if they were in one shed. If they had all been brought inside, exactly as you say, it goes through them. If they are out on the range, it takes longer. It gets them eventually, but rather than three or four days it might take seven to 10 days.

Q23 **Barry Gardiner:** I am trying to understand the logic. If it is less transmissible outside and putting your flock inside is going to increase the likelihood of transmission if it gets in there, then how do the two compare in terms of risk?

Paul Kelly: By bringing them inside, you are stopping the risk of getting it. Once they have it and they are inside they will die a lot quicker than if they were outside. Bringing them inside reduces the risk of them getting it in the first place.

Richard Griffiths: If there is a number on it, it is generally thought that it halves the risk by bringing them indoors.

Q24 **Barry Gardiner:** I understand what you are saying. I am trying to think then in numbers of birds. If the flock does contract the disease at twice the rate outside, is it possible that you could isolate those healthy ones by calling in and doing tests earlier?

Paul Kelly: If the flock gets infected the whole lot must be culled.

Chair: It is probably a question for the vets in the second session, Barry.

Q25 **Barry Gardiner:** Changes that you would like to see are simply about the fabric of the buildings?

Richard Griffiths: This step has already begun, a complete review of biosecurity and of what has not worked. We must be honest that things have failed during this outbreak. We will find where biosecurity has failed, but we need to learn from that process and the industry, together with DEFRA, is absolutely committed to improving that. The whole biosecurity review is essential on this.

Paul Kelly: It is a challenge for the free-range industry, for the free-range businesses that are out there. You can be as biosecure as you want in terms of changing boots and wellies and going on to the farm, but if wild birds are coming on to the site, that is it. You can have all the biosecurity in place that you want, but that will spread the disease.

Q26 **Steven Bonnar:** I have two questions for Richard and Paul. In relation to the Animal and Plant Health Agency and its response to the situation,

how well do you think it has managed the situation since October last year? From your perspective, did it have sufficient resources in place to deal with such an outbreak?

Richard Griffiths: Those are two questions with very different answers. I will take this opportunity to praise the response of DEFRA and APHA and all the staff involved. They have been marvellous in the face of this intense outbreak that we have never seen before and very supportive of industry, and that should be noted.

As to the resource level, I do not believe that they have sufficient resource if this level of intensity of bird flu is to continue. I do not believe that they do have sufficient resource to react appropriately. We need to look at how we assign responsibilities and resources. Industry has a lot of resource out there that it cannot apply because responsibility is held with APHA. I think we need to look at how that responsibility can be shared and more resource from industry applied if we are to keep having this level of bird flu outbreaks.

Yes, there have been some very good examples of joint working, but we need to plan for the worst-case scenario going forward, and that requires more resource and more vets, at a time when we know there is a shortage of vets across Government work. We need to look at alternative ways to be ready for these issues.

Paul Kelly: APHA has been exceptional, in my opinion. The workload that it has had to cope with has been unbelievable, but I do liken it to having enough snow ploughs in place to deal with the biggest snow blizzard we have ever had in the history of the UK. You cannot cater for that. What it has done, given the circumstances, has been fantastic.

Q27 **Ian Byrne:** The Government recently changed the compensation rules for flocks and you touched on this before. On 20 October the Secretary of State said, "We have moved the start of compensation to as early as legally possible without the introduction of primary legislation. We are seeking to assist farmers as much as we can when they are caught out by this terrible disease". Paul, has that change made a difference?

Paul Kelly: It does make a big difference to the larger companies that have a site that maybe has 10 buildings on it. It never gets into all of them all at once. It will be one building gets infected and that building will start to die very quickly, but very rarely will it go through the whole site because the buildings are separated.

For the bigger companies, it was a big welcome and help to them, no doubt about it. It is 48 hours after confirmation of the disease, so by the time they get there to cull, the shed that was infected will have died and they have all gone. It may have spread through a little bit, but the rest of the farm will be okay. For the smaller independent producer that only has one shed on the farm, when they get it, it is game over.

Q28 **Ian Byrne:** How do we make it fairer? How would that look?

Paul Kelly: We should be getting compensation on notification. To stop the spread of the disease the farmer phones up APHA as quickly as

possible and says, "I think I might have it", doing the responsible thing. If he notifies it and it is confirmed, then surely he has done the right thing and should be compensated. I do reiterate as an industry we do not want to rely on compensation. We want a vaccine so we can take a normal commercial risk.

Q29 **Ian Byrne:** But where we are now, we do not have that?

Paul Kelly: Where we are now for the small independent producer like us. That one farm we had, one shed, 9,500 turkeys gone, £700,000 because it was in one airspace. We are not a site that has 200,000 or 300,000 turkeys on one farm. We are a smaller grower.

Q30 **Ian Byrne:** When you talk about the instance from Norfolk and that example, it is devastating, wiped out in four days. Are there going to be many like that?

Paul Kelly: I know of nine small businesses that have gone and we are just in November. A lot of the egg producers that you see, it is not just about Christmas turkeys, it is about free-range egg producers. They have to go through January, February and March and they are going to be in the same situation.

Q31 **Ian Byrne:** The compensation scheme that you highlighted, you feel it would be a fairer model if we look at the smaller producers?

Paul Kelly: Yes.

Q32 **Ian Byrne:** Would they still be in existence now if we had a fairer compensation scheme?

Paul Kelly: Yes, absolutely, if it had been paid on notification, rather than when they arrived to cull the fit and healthy birds. It is about cash flow. They have lost all their cash flow. It has gone out of the business and they do not have enough to start for the following year.

Richard Griffiths: Paul is absolutely right, but there is a question here of how we look at risk. Up to this point the risk has been purely based on a veterinary assessment on the control of disease, and quite rightly so, but when you are rarely having double-figure numbers of cases a year, that is manageable. At this point the risk is also to the commercial side of businesses; it is to food supply; it is to business continuity; to food security. We need to be able to feed ourselves going forward and have that provision. The concept of risk has expanded and we need to account for that when making these decisions, whether it is on compensation, biosecurity or contingency planning, resource use and application or vaccination. Risk is a much bigger thing now, because it is all about food as well as disease control.

Q33 **Ian Byrne:** I am going to move on to the impact the freeze and thaw scheme has had, which was launched in October. Has it done anything?

Paul Kelly: Yes, it has. For our business we do have fridges and freezers so we could take advantage of that. It took a lot of stress and strain off the business because we could pluck them and get them into the fridge. As soon as we could get our team together we started plucking our

turkeys. For the smaller producer, they do not have the facilities. If we do not have a vaccination programme in place or a compensation scheme in place for the smaller producer, they will look to do that next year. We do need to know that early so that we can plan to place the poultry earlier so we can get them processed at August and September time before bird flu season starts, but it is a big help.

Richard Griffiths: For other larger entities it has been equally well received and used, so yes, it is very beneficial.

Q34 **Barry Gardiner:** James, can you give us the latest data on avian flu in wild birds?

James Pearce-Higgins: We have seen an unprecedented impact particularly over the last 12 months or so. Avian influenza is something that we have seen in the past, particularly in the winter affecting water birds, but what was incredibly unusual this year was then seeing large numbers of impacts on our breeding seabirds. In this country we hold around a quarter of Europe's breeding seabirds and during the course of the spring and summer large numbers of dead birds from a range of species were reported—a wide range of colonies. I can give you some more detailed figures.

Q35 **Barry Gardiner:** Are we talking gannets, great skuas, roseate terns?

James Pearce-Higgins: Yes. First, particular impacts on great skuas up in the northern isles. It will take probably the next breeding season or possibly more to have a proper assessment of the overall impact on the population. Great skuas, for example, are birds where we hold about 60% of the world population. Data from NatureScot suggests that 13% of those have been picked up dead and those are the birds that have been picked up dead. That suggests that the level of mortality is high.

We have been able to look at our ringing data, so our army of bird ringers who go out to put metal rings on wild birds. An analysis of those data and the reporting rates of those has flagged up seven species with very high levels of mortality this year, so great skua and gannets, with many of the large gannet colonies widely affected, guillemots, kittiwakes and then the terns that you mentioned. It has had a devastating impact on sandwich terns, arctic terns and common terns on the east coast, particularly in the North Sea, and as you mentioned the roseate tern as well. It is not just the UK.

Q36 **Barry Gardiner:** Of the world's population of the roseate terns what do we hold?

James Pearce-Higgins: We only hold a fairly small proportion of the world population here. It is only known in two sites in Great Britain and Ireland, so Rockabill in the Republic and Coquet Island in England. The latest estimate from Natural England is that maybe 30% of those birds were killed this year, so there are significant impacts. These birds are long-lived and slow breeders, so when you have a large mortality such as we are seeing, that will have a long-lasting impact on these populations, probably for decades to come.

Barry Gardiner: You did not mention the greylag goose.

James Pearce-Higgins: We are seeing inflated numbers of goose, duck and swan mortalities. So far initial analyses of our ringing data suggests that the only species where that level of mortality is unusual is mute swans. It looks like we are seeing inflated levels of mute swan mortality, but we are only at the start of that water-bird season and we will see what happens over the remainder of the winter.

The one other group to mention is barnacle goose. Barnacle geese that winter on the Solway were significantly impacted last year and the estimates there are that potentially a third of that flock, so possibly 17,000 out of about 50,000 to 60,000 individuals, was killed. We are now looking to monitor those populations as they come back and we are trying to get improved surveillance of the mortalities to track those impacts.

Q37 **Barry Gardiner:** Is there any evidence from prehistory, from fossil record, of such huge die-offs happening? With 16,000 geese in an estuary dying at the same time, if that had happened a few million years ago you imagine it might have left some trace in the fossil record. Is there any evidence that this is a new phenomenon or is it a cyclical phenomenon, that when populations get to a certain size it tends to happen?

James Pearce-Higgins: Bird populations will fluctuate and will occasionally suffer mortalities and sudden mortalities. We do not have long-term monitoring data for many of these species going back beyond maybe the 1960s and some more historical data. Certainly in the context of that timeframe, I think the level of mortality that we are seeing is unprecedented for the seabirds. Perhaps the closest analogy I can think about is maybe the sudden losses that we saw of some of our birds of prey in the 1950s and 1960s associated with DDT and then the collapse of farmland bird populations during the 1970s and 1980s associated with agricultural intensification. If you want an analogy of the potential magnitude of what we are seeing, I would put it in that sort of frame.

Q38 **Barry Gardiner:** Is Lord Benyon right that avian flu is now endemic in the wild bird population?

James Pearce-Higgins: It is difficult to judge based on a single year. Clearly what we have seen is very high levels of mortality in the spread last winter and for the first time such significant mortality this breeding season in terms of seabirds. We are now waiting to see what happens this winter. There have been other instances of significant mortality in other countries. In 2018, for example, there were significant die-offs in some of the South African seabirds, then they had a couple of quieter years and then in 2021 again significant mortalities of a range of seabird species. I would not want to say that this next summer is going to be the same as the one we have just had. I think the disease is quite uncertain and it will be interesting to see from a virological perspective the statements we will hear a little bit later.

Certainly this is the first time that we have seen persistent mortalities for the whole of a calendar year, so in that context there has been no letting up of mortalities.

Q39 **Barry Gardiner:** I asked Mr Kelly and Mr Griffiths about their biosecurity. The BTO does ringing of birds, and that is one of the ways that you collect data. What are the biosecurity methods that you use when you are ringing birds to ensure that there is no transmission from one to the other?

James Pearce-Higgins: That is something that we have been looking at with support from others: minimising the reuse of bird bags, increased biosecurity in terms of handwashing and so on between handling sessions. One of the key things is that the majority of the birds that people will be handling and ringing will be healthy birds. One of the things that we ask is for our ringers to check sites and if there are signs of diseased birds or dead birds not to undertake those activities or, if that occurs during a particular ringing session, for that activity to stop.

Barry Gardiner: Do you mean the ringing session would stop?

James Pearce-Higgins: Yes.

Q40 **Barry Gardiner:** Do you release the bird back into the wild?

James Pearce-Higgins: What I mean is that in those circumstances generally if people are out in the field and seeing birds. There are circumstances where certainly during the course of this breeding season people were undertaking particular research activities as part of tracking the impact of the virus, particularly some of the professionals, and in those circumstances people were wearing full protective gear and so on. Normally it would be a case of working on the basis that most birds that you are dealing with, because of the impacts that the virus has on those birds, will be healthy.

Q41 **Barry Gardiner:** How challenging is it to get an accurate picture of how the disease is spreading in wild populations and how could you improve the data that you are getting?

James Pearce-Higgins: As I outlined in the paper that I circulated in advance, in this country we are in a reasonably good position because we have a good background network of surveillance activities, as I flagged up, supported by JNCC partnership and working with our citizen science volunteers.

Probably the most challenging area of that is our seabirds. We have just developed a new partnership with JNCC, taking over the direct running of that scheme. Because of the remoteness of many of those seabird colonies and the challenging practicalities of studying them, unfortunately that is probably where our data and our long-term monitoring is at its weakest, but we are working with other partners in the seabird monitoring programme to try to improve that.

There is an urgent need for resurvey of the sites that we think have been most affected to try to get a better estimate of what impact avian

influenza has had over the last 12 months and potentially moving forward if it continues to impact our seabird populations.

We have just completed a periodic census of our seabirds, a snapshot over four or five years, overseen by JNCC. That stopped in 2021-22. Potentially going back to those colonies next year—and possibly it might take several years—would be needed to understand what overall impacts that has had. It will require a combination of professional work and also enhanced volunteer coverage where that is possible. You are right to pick that up, and that is one of the key needs moving forward to try to address those surveillance gaps so that we can have as good an understanding of the impact of the disease on the birds as possible. That then provides important information to inform the subsequent conservation and recovery of those populations.

Q42 **Barry Gardiner:** Indeed, and to the domesticated flocks also. You said "key need". We might phrase that in the Committee report in terms of a recommendation. If you were putting together such a recommendation, what would it be?

James Pearce-Higgins: It would be to resource the surveys that are required over the next few years to address those gaps, particularly in terms of our seabird populations, where there is that biggest gap going forward.

Barry Gardiner: Funding for a standardised methodological—

James Pearce-Higgins: Yes, so the methods are there. We have an existing partnership with JNCC. It is additional resourcing to help that prioritisation work and support that. In many cases, that will take either professional coverage or perhaps support for some of the volunteer coverage. It is not cheap. We rely on some expert volunteers to go out to undertake expeditions to do some of this seabird monitoring at their own cost in terms of hiring boats and so on and having some support to help them to do that.

Q43 **Barry Gardiner:** How much do you speak to these guys?

James Pearce-Higgins: Not that strongly in terms of the farming sector. I echo what Richard and Paul said in terms of APHA and the support that it has given and DEFRA in terms of the work that we have done with it, but one of the things that this has flagged up is the need for much stronger collaboration and close working between the wildlife disease and the virology sector and bird conservation, the wildlife sector, to understand this virus much more, the pathways of transmission and the movements of birds. There is a lot more we can learn from the tracking of birds to understand their habitat uses and what the risks are in and around poultry settings.

We provide a lot of data to APHA to inform those on-the-ground decisions, but there is a real need to make better use of those data, to better understand the movements of wild birds and what are the key species. Finally, we need to start to think about testing some interventions to try to reduce the risk of disease transmission.

Q44 **Barry Gardiner:** By that, are you talking about scaring off wild birds on a flight path from landing in that area? What do you mean by that?

James Pearce-Higgins: There is a lot of uncertainty in this in terms of how effective different interventions are likely to be. One of the things that people have suggested—and there is some anecdotal evidence that this can be the case—is that the rapid removal of carcasses can potentially play a part in reducing the scavenging of those dead birds then facilitating ongoing spread.

Certainly I know the RSPB and some of its wardens up in Scotland are undertaking this on some of the key great skua colonies. There are some data from the Netherlands suggesting that doing that around some of the tern colonies, where they had very high mortality rates, may have reduced that rate of spread within colonies. There are some measures there that could potentially be employed, but there is a lot of uncertainty. We need to test those and collect the data to understand what impact those could have.

Q45 **Barry Gardiner:** Do we know that it transmits through vermin? If rats or mice are feeding on the carcasses, do we know?

James Pearce-Higgins: Even the other birds, so gulls, skuas and other seabirds will scavenge on those carcasses. That ingestion route is likely to be a key one. You are right, we need more understanding of those pathways of transmission. One of the other species groups that I have not flagged up that we are certainly seeing quite frequently in the APHA mortality statistics is birds of prey—buzzards, a number of white-tailed eagles testing positive, hen harriers—species of conservation concern. The assumption is that they are picking up the virus from the ingestion of infected prey. We do not yet know whether that is of sufficient level to have a population level impact, but again we are keeping an eye on it. That does then start to play into impacting our ability to conserve some of these species—species like the white-tailed eagle being introduced into the Isle of Wight. There are problems there with the virus being detected in some of the chicks that they were going to use for that translocation work.

Barry Gardiner: Thanks very much. That was very helpful and comprehensive.

Q46 **Julian Sturdy:** Paul, before James came in, you talked about the bird flu season and James was talking about the wild population. What are the early indicators? Are there any specific early indicators that we should look out for within bird flu season, and does that tie in with migratory wild birds such as geese coming in from Scandinavia and so on?

James Pearce-Higgins: One of the things that this has flagged up is that we have not had good background knowledge or an ability to rapidly identify periods of sudden mortality in wild birds. I have mentioned the bird-ringing data, which is the closest we can get to having a sense of what the background levels of mortality are and then looking at sudden increases in those recoveries.

One of the things that has happened over the course of this summer is that the different statutory nature conservation bodies have started to develop their own systems to better use their staff to collect mortality data in a standardised way. We have the APHA statistics, which at least give an indication of the frequency of cases. They do not necessarily give us an indication of the numbers of dead birds. There is still a significant gap there.

As an organisation, we have developed a couple of additional reporting routes for our surveyors to be able to rapidly report information around numbers of dead birds. We will produce a weekly report based on those data to the statutory nature conservation bodies.

Q47 **Julian Sturdy:** Sorry, that is something you are doing and some of the bodies, but is there no set system in place? Does DEFRA not have a certain system in place—an early warning system or anything like that—that would trigger things?

James Pearce-Higgins: There are the weekly reports in terms of the dead birds that are reported through the DEFRA helpline. One of the things that has flagged up has been some of the cases such as mute swan, great skua and gannets. What those do not tell you is the number of dead birds that are associated with those. Something like 120 cases of gannets are reported in those statistics, but that represents probably mortalities of around 10,000 birds.

The other tool that is worth bearing in mind is that we have been involved in a large collaborative project across Europe, pulling together information around the movements of migratory birds from ringing data, tracking data and a European migration atlas, and with funding from the European Food Safety Authority we have developed something called the migration mapping tool. It is in the first phase at the moment, but what that enables us to do is to understand the risks of the spread of avian influenza, depending on where those cases are on the migratory pathway and the risks of it potentially coming into the UK. We have ongoing funding to do more.

Q48 **Julian Sturdy:** Because you know they will migrate at a certain time?

James Pearce-Higgins: It is an early warning system. It is based on a concept that we developed as an organisation about 2004 or 2005 with DEFRA funding on the back of previous concerns over avian influenza. This allows us to do more development work on that, but there is a lot more work to do to try to make full use of the data that we have there. There is the potential for that early warning development work to help inform decision-making, so it is a combination of that mortality recording, plus understanding where those outbreaks are and thinking about the risks for movement.

The final thing I would add is greater virological surveillance. I have mentioned the APHA statistics and the sampling of dead birds, but there is not a system in place for monitoring the virus in live birds. The Dutch have been doing some interesting developments in that space over the

last few years and that may be another area that is worth considering and before we see those mortalities perhaps giving us an opportunity to pick that up.

Q49 **Julian Sturdy:** Sorry for my slight ignorance on this—it might sound like a stupid question—but is there a certain species of birds that are more resistant to it, so can be carriers but not die from it, and in others it is more fatal?

James Pearce-Higgins: Yes, there is definitely variation in the susceptibility once birds are infected. Some birds we think die quickly. Others, perhaps some of the ducks, maybe some of the corvids, rooks and crows, potentially can survive for a week or more, two weeks, or even not succumb to the disease, but they shed the virus. There is a lot of uncertainty there.

Q50 **Julian Sturdy:** They could be carriers spreading it into the farm environment?

James Pearce-Higgins: Yes. We have been trying to do some work looking at the vulnerability of different species to the disease, but we need more understanding of that variation in susceptibility of different species and species groups and the potential for different groups to shed the virus. Definitely more collaboration, as I said earlier, is required between bird ecologists and disease experts.

Chair: That was quite a sensible question.

Q51 **Dr Neil Hudson:** We have covered a little bit of this, and I guess the take-home message is that there needs to be more collaboration and more work to understand between wild and domestic. James and Richard, do you think the increasing numbers in the wild birds does explain the increasing numbers in kept birds? Is there enough evidence yet to draw that link?

Richard Griffiths: There could be an association. I am not an expert in what the transmission routes are, particularly given what we have heard around some of the security associated with the sheds in practice. There would be value in studying the disease landscape around particular premises to understand what the risks are.

I know there was some work done in the Netherlands and I do know how analogous the Netherlands is to a UK situation. When they had a significant outbreak in wild duck, widgeon and others a few years ago, they did find differences in the frequency of incidents in wild birds comparing sheds that had avian influenza from those that did not, but there was also some confounding variation in terms of the landscape context. The ones with the more wetland around them, which had more duck, were the ones that were more likely to have had infection, so it was not a 100% watertight analysis.

Q52 **Dr Neil Hudson:** As you say, there are a lot of variables in there, and I think Julian's point was well made in terms of potentially birds that are not affected significantly that could be coming in as wild birds and carriers coming into farms and putting it there. It is uncharted territory in

terms of what we do, but we need to find out more. If the evidence is suggestive that there is a season and there are more cases in the wild birds, we must try to do something to stop that spread from wild to domestic. Do you agree with that?

Richard Griffiths: I do agree, but one of the telling points for this last year—the bird flu year from October 2021 to September 2022—is it did not stop. There were 152 cases in Great Britain and 6 in Northern Ireland in that 12-month period. It did not stop. That is indicative. Anecdotally we hear from farming colleagues about the sheer number of dead wild birds in and around farm sites. That is indicative. I agree, we do not have enough hard evidence yet, but it is certainly suggestive that it is an area that we need to focus on.

Paul Kelly: It could have been a lot worse this year because of the avian influenza in France in a lot of the game industry. You could not bring partridge or pheasant over. It was reduced massively in numbers, but one of the farms that we had infected, three weeks before we went down with the disease they were picking up pheasants, going around on quad bikes picking pheasants up within 200 or 300 metres of our farm and we are in lockdown. The game industry could be potentially a huge carrier.

Q53 **Dr Neil Hudson:** Are you aware of any way of harvesting and collecting these data in terms of the anecdotal reports to then see if we can make strong associations? Creating an evidence base will help inform policy, both in terms of managing it in the wildlife sector but also in the domestic side of things. Are you aware?

Paul Kelly: No.

Q54 **Dr Neil Hudson:** That is something maybe we can take away and make recommendations in some way to say that it is out there, but we must try to improve the evidence base in some way.

James Pearce-Higgins: Partly that comes down again to the sampling capacity. That point that Paul makes, I know it is one that others in the conservation sector have expressed concern on, about the potential for wild gamebird releases to precipitate some of the outbreaks in wild birds, although understanding the security that is associated with those birds as well.

It is also worth bearing it in mind that when we talk about migratory birds, the potential for the migratory birds to pick that up from the poultry sector is not just a UK situation where, as we have heard, the biosecurity is high. Potentially there are other countries elsewhere on their migratory route where perhaps they are more exposed to domestic poultry, which could be carrying it. This is an international problem, not just in terms of the mortalities that we see. There have been large numbers of cranes killed in Israel and pelicans in Greece. About 60% of their pelicans died during the breeding season. I have mentioned South Africa. This is occurring right across these migratory flyways, but right across these flyways there is potential for significant interaction with high-density flocks of domestic birds without the biosecurity that we have

heard about here, which does provide a route for infection of wild birds that then have the potential to carry that disease elsewhere. Of course this is how this originated in east Asia in the 1990s.

Dr Neil Hudson: That is a very salient point to end this question with; we know that infectious agents, viruses and so on, do not respect international or domestic borders. That is a salient point for us all to bear in mind. Back to you, Chair.

Q55 **Chair:** Looking at what recommendations we might make to the Government following this evidence session, one point that seems to come up is the collection of dead birds. James, you say that the RSPB has been collecting great skua, but there are a lot of dead birds. Knowing what to do with those and to be able to dispose of them safely, would you say that is something that the Government should look at?

James Pearce-Higgins: Yes, there are some practical challenges around how you do that. As I said, the guidance during the summer from DEFRA was basically that it was not necessarily recommending, for understandable reasons, that those dead birds should be collected. There is variation in the responsibility, whether it is landowner responsibility or local authority responsibility. From a conservation organisation perspective, there were organisations in certain circumstances—such as RSPB, the National Trust and internationally in the Netherlands—collecting those carcasses because they felt it was something they could do try to break that disease transmission pathway and reduce the level of spread. Moving forward, if we have a similar year next year, trying to understand if that significantly reduces the risk of spread would be helpful.

Q56 **Chair:** With that in mind, we may want to ask the second panel how long the virus can remain viable in a dead bird. We know from covid that the virus did not hang around for very long in a dead body, but we may ask that.

Finally, Richard, the current compensation scheme only compensates for the birds that are still alive. We have heard from Paul how quickly this disease spreads within sheds and how when APHA arrive most of the birds may well be dead. Is there a case for an industry-funded insurance scheme, maybe underwritten by Government, to ensure that the load is spread across the industry?

Richard Griffiths: That has some potential, yes, and is something that the industry would be very willing to explore. Compensation and any insurance is important, but it is secondary to stopping it in the first place, so thinking about vaccination, biosecurity, better resourcing responsibility and sharing, those are the priority tools, with compensation and insurance bringing up the rear for when that net fails.

Paul Kelly: Fast-tracking the vaccine for me would be the solution to all our problems, to the taxpayer and to the farming industry. I think everyone now has accepted that we have lost the battle, lost the war, and we must vaccinate. Whatever forum it takes to make that happen, if

we could fast-track that, the industry would be in a lot better place in the coming months.

Chair: Thank you very much for your time and for giving us such useful evidence. I repeat the point made by Dr Hudson, coming from a farming family myself, and the devastation of having an outbreak on your farm, particularly if it is a small unit with just one shed. That is every single bird on that farm and a key part of their business model will be the Christmas poultry trade and knock-on effects to local butcher shops as well, who would be benefiting also. Thank you for coming along.

Examination of witnesses

Witnesses: Christine Middlemiss and David Holdsworth.

Q57 **Chair:** Welcome to our next witnesses. David, you were sitting at the back of the room and I am sure heard the congratulations your organisation received in terms of working with farmers under extreme pressure. You were compared to snow ploughs in a very deep blizzard, but please introduce yourself and we will move on to Christine.

David Holdsworth: That is a tremendous commendation of the people who work at APHA, who have worked under difficult circumstances and have delivered amazingly. I am the chief executive at the Animal and Plant Health Agency.

Christine Middlemiss: Good afternoon. I am the UK and England Chief Veterinary Officer.

Q58 **Chair:** Thank you. We worked together when I was a Minister in the Department. The first question is why has this outbreak of avian flu been worse than previous outbreaks and why did it not even go away over the summer?

Christine Middlemiss: You are right, this is the first time that we have had the virus over summer, not just in the UK but across Europe. Our traditional and usual risk pathway and how the virus arrived last October in 2021 was in the migratory wild birds, as we have heard, flying back from their summering in the north of Russia.

There are a number of global bird flyways and in Russia a number of them come together from Asia and Africa. A bit like children on their first day back at school over the holidays, they share their viruses. They came back to us last autumn with H5N1, so a different type than we had had the previous year, a different strain. This strain has turned out to be very fit. It is very infectious. It takes a very small amount of virus to create infection in a bird, if it is exposed to that, and by that I mean teaspoonfuls of infected material having thousands of infectious doses in it. It survives very well.

As we have just heard from the first panel, it has been devastating, with large amounts of infection in our wild birds. It therefore got into the seabirds and as they came together in their breeding colonies, that allowed the infection to continue spreading through those colonies. As the

winter weather became worse again in the autumn, there has been more inland contact and we have seen increasing numbers of both dead wild birds and then outbreaks going coastal into inland areas. It is because there is so much virus. It is very infectious and it got into wild bird populations that were able to perpetuate infection over the summer. In effect, it is the same outbreak that is continuing. We administratively changed it on 1 October. It is the same outbreak and it has been continued in our native wild birds. We are watching closely as to what we will see in our migratory returning birds this autumn.

Q59 **Chair:** Have we basically resigned ourselves to the fact that this disease is going to be around within the wild bird population and domestic kept fowl pretty much from now on?

Christine Middlemiss: Not necessarily. We hope that they will build up immunity to it. As we previously saw, we would have a much smaller outbreak and then we would have nothing for two or three years, then another one as older birds became immune and then a new naive bird population came along. Very tentatively, from the surveillance that we are seeing, it seems to be younger wild birds, particularly migratory, returning that are infected and we are not seeing so many older wild birds, but our surveillance is not based on the ages and demographics of wild birds, so I say that tentatively.

Q60 **Chair:** Picking up on the question raised in the last panel, in terms of dead wild birds lying around the place, what benefit would there be of collecting those and do we know how long the virus could be a threat in a dead bird?

Christine Middlemiss: There are a few studies on that. It depends on two things, the material of the dead bird the virus is in and the environmental temperature. In higher temperatures the virus survives less well. It loves cold wet weather. In feathers, the virus survives a longer time. In muscle, liver and so on it is less time. Feathers in warm temperatures can be around 20 days or so. Feathers in cold temperatures can be into hundreds of days with that, but there is a trade-off. Our colleague from the British Trust for Ornithology was right about if you pick up and remove those infected carcasses, but if the birds are not used to people you might make the live ones move more and have more contact. It is an area where we need to understand—

Q61 **Chair:** It is the deprivation effect that we used to have with badgers.

Christine Middlemiss: I suppose similar. They are moving around spreading disease and virus. It is right, it is an area that we need to understand more about.

Chair: David, have you anything to add on that point?

David Holdsworth: We are collecting samples. We do not collect all dead carcasses, but we have 427 positive findings across the UK during this outbreak. That is at 153 locations and it covers 56 counties and 39 species. We do take samples from dead carcasses—it is a key part of our

surveillance—but what we do not do, as our colleagues said, we do not remove all dead carcasses.

Q62 **Chair:** I was talking to somebody from the British Egg Industry Council, who was saying that there was some air testing going on downwind of culls to see if there was any risk from that. Have we any results on that so far?

David Holdsworth: Not yet.

Chair: But it could potentially be a risk?

Christine Middlemiss: The first thing is that we need to establish the proof of concept, which is what is happening now, that it is a reasonable hypothesis and how we have set it up will help test that. Once we have done that, we will carry out the actual research study, yes.

Q63 **Dr Neil Hudson:** First of all, can I thank you both and put on record the Committee's tribute and thanks to the vets and the officials in APHA for all that they are doing at this unprecedented time?

I guess that leads me into my first question, which I asked of the previous panel. We have talked about the impact on the birds themselves, wild and domestic, but what information can you give us about what the impact is on people, the vets and officials working on the front-line, on their health and their mental health? I think that it is powerful for the Committee and the public to hear how important this outbreak is and what effects it is having.

Christine Middlemiss: It is important to remember that this is our third consecutive year of avian influenza. We have had a bigger one every time. For a lot of those vets, technicians and everybody in the system, people doing licensing and everything—because it is the whole system that comes together—this is the third year of doing it and it is even worse this year. Yes, we have made efficiencies and we have brought in different resource, but their resilience and dedication, which we must not take for granted, is remarkable to come back every year and keep doing that. Some of them have missed every Christmas for the last—well, hopefully not three years, but two years so far, family events and things, because you are rostered on to work. They appreciate that this is a notifiable disease; we all have to be able to respond.

In many ways it is like being in practice. We are responsible for the overall England flock health. If something happens at 9 o'clock at night, we have to respond to it at 9 o'clock at night, just like if it was a dog in a road traffic accident or something. They have been absolutely fantastic, but it takes a toll, as we know, on everybody's personal lives and mental health. We hope as vets to treat animals and protect animals in this situation because we need to stamp out the virus, primarily because it is what we call zoonotic; it can spread to people. This strain is very low risk, but you do not want it to change and become more infectious to people, so we need to stamp it out. I am sure that David will have more to add from the leading agency on that.

David Holdsworth: As Christine said, it has had a tremendous impact on the people. It is not particularly pleasant work—those of you who have farms will know—when you are going into these situations. The RPE equipment they have to wear is not particularly pleasant to work in, 12 hours in one of those hazmat suits. It is a bit like boil in the bag. It is physically demanding, then it is mentally demanding when you are dealing with farmers who are going through a traumatic event for them, their families and their livelihoods. As Christine said, they have been doing that for three years.

The model that APHA is set up on works. It joins up the entire system, from surveillance, research, testing, field and vet. All that is good and I can say that coming back in after being here for foot and mouth in 2001, that join-up of the system is an excellent move forward. However, it was not designed to cope with an outbreak of three years in longevity. We are now having a look at what this means for how we operate as an agency, what it means for how we resource outbreaks once they go past a certain period and what we need to change. We have adapted along the way. We have changed our policies. We have outsourced some of the work that we do not need veterinary and technical staff to do, but there is more that we need to think about as we look to go through this season and into potentially the next.

Q64 **Dr Neil Hudson:** It is a very live process for you and this overlaps a lot with the parallel inquiry that we are doing on rural mental health. You, as an organisation, are very cognisant of this and the need to support your people through this. If it keeps coming and, heaven forbid, something else comes in, a different virus in a different animal as well, you are cognisant that you need to have the infrastructure and the support mechanisms in place to support your people?

David Holdsworth: Absolutely. What we have had to do is start intervening. Vets are absolutely committed in my organisation, as are animal health officers and those dealing with the licences. What we have had to ensure that we are doing as leaders is putting interventions in to say, "You have done enough. You cannot work beyond this. We are now intervening and telling you: go home". The commitment is there and the challenge for us as leaders is that we have to have the structures in place and the support to say, "You have done enough, shift over, go".

Q65 **Dr Neil Hudson:** Thank you, that is helpful. I will segue into my main question now, which is on vaccination. In the previous panel we talked a bit about the policy and there is a call for it on some sides as well. What is the current thinking and the current state of play with the Government's approach to the use of vaccination and the development of a vaccination strategy? Where are we at? What are the pros and cons? Is it something that we are moving towards but we need more evidence on? Christine, could you say where we are at with vaccination?

Christine Middlemiss: Currently, it is only allowed in England to vaccinate zoo birds in some very specific circumstances. In Scotland and Wales vaccination is prohibited completely. There are two vaccines

authorised in this country. They are not for this strain. We could use them. They might dampen down disease, but we would likely still have infection there. Then it becomes difficult to distinguish between birds that have been infected by the virus and birds that are vaccinated. That is important when hopefully we get back to country freedom and it is very important for trade. Luckily, through recognition of regionalisation for trade, we can trade with many countries from outwith the infected zones.

That is where we need to understand more about how effective the current authorised vaccines would be against this serotype but also as serotypes change—and there is a global flu map project that APHA colleagues are involved in—understanding more about the virus changing and how you adapt a vaccine to do that. This is a very strong virus and to vaccinate against it would be great, but we do not want to do that and it then encourages a different strain to become stronger. We need to understand more about the effects on serotype of the vaccine and the DIVA testing, the distinguishing between infected birds and—

Dr Neil Hudson: Where are we with the development of a suitable vaccine and a suitable differentiation?

Christine Middlemiss: A global conversation has started. This time last year, because of the trade circumstances, industry colleagues and globally people were not interested in vaccinating. We hoped that it was going to be a one-year, one-winter event. It hasn't been. There is now a global conversation led by the World Organisation for Animal Health. It is supporting flu maps and looking at the science of it. We are setting up a working group, which needs to be joint—us and industry. We have to do this together because there will be different cost benefits across industry for those that export, those that have the high-value genetic stock. We need to work through all that to work out what an effective strategy looks like, how we talk about it in trade terms—that is important, working globally on that—and the costs and benefits of it. It is happening, but it is not going to be overnight or quick. It is not going to be a silver bullet for this year.

Q66 **Dr Neil Hudson:** As we talked about, these viruses do not respect international borders, but you will work with your veterinary officer equivalents in Europe as well?

Christine Middlemiss: Yes.

Q67 **Dr Neil Hudson:** Are you optimistic that those discussions are happening and that respective Governments get it and they think, "Yes, we do need to fund some of this research for developing the right vaccine, but also developing this differentiation between naturally infected animals and vaccinated animals, that testing side of things"? Do you think that dialogue is there and Governments in our whole geographical region are getting it and saying, "Yes, we need to collaboratively work together"?

Christine Middlemiss: I think that it is happening. In the Europe region, I think that the conversation is good among Governments. Across industry and Government in the western world I think there are still

different views and we need to be more joined up. We know, for example, that the US exports a huge amount of chicken. They are very worried. Their industry is very worried about the trade impacts of vaccination. If most of the western world moves together on vaccination, that will be powerful and that will help to minimise a lot of the trade arguments.

Q68 **Dr Neil Hudson:** If we could move in that direction and we could sort the trade issues, we had the right vaccine and we were able to differentiate testing-wise, what about the logistics of people doing it and the logistics of doing it in the birds themselves?

Christine Middlemiss: At the moment it is an injectable vaccine and you are talking about vaccinating day-old chicks and things, so there is a lot of logistics to work through. That is what I meant about the cost benefit in different types of sectors and different types of commercial structures and how that plays through. That is why it needs to be a joint working group because we need to do it together.

Q69 **Barry Gardiner:** David, how are you working with the backyard bird keepers, if I can put it that way, to ensure that they have the same biosecurity that we were hearing from Paul and the industry earlier?

David Holdsworth: Those that are registered get regular updates and messages from APHA as to movement of the disease, biosecurity, and the housing orders that have come into place. For those that don't we have a paid-for advertising campaign that is going out across multiple media channels to try to reach different audiences, including backyard flock owners. We are also regularly using all the APHA, DEFRA and local authority social media channels and partners like the British Poultry Association. We have a multichannel approach that is going out there at the moment.

Q70 **Barry Gardiner:** That sounded like a good information exercise. Is there a policeman with a truncheon behind it?

David Holdsworth: Local authorities are responsible for enforcing the regulations in this space. Where we are made aware of something, we will provide advice to the local authority for prosecutions, but it is for the local authorities to take enforcement action within their areas.

Q71 **Barry Gardiner:** As such, there is not an inspection regime going on. There is education, there is enforcement at the end of the day if you know something is already not as it should be, but there is not an inspection regime to tighten things up or to make sure that things are as they should be?

David Holdsworth: No, not at the moment, not with backyard flock owners. I think that is a question maybe Christine wants to come in on in terms of biosecurity.

Christine Middlemiss: Yes.

Chair: I will just add there that certainly in my part of North Yorkshire, I think that I am the only person who is complying with the rules at the

moment. There are a lot of hens running about and you do not have to walk very far to see them.

Barry Gardiner: The Chair has just caused great disgruntlement in all his neighbours now.

Chair: Well, no. They should comply.

Christine Middlemiss: Yes, in an ideal world it would be great if everybody was inspected and advised and they did it, but for me it is a trade-off in how we best use resource for disease control. While we do not want backyard flocks to have disease—we will have to cull them and where they exchange eggs for money they are classed as commercial, so we have to put in restriction areas around them and that has an impact for all poultry businesses that are in those restriction areas—with this strain we are not seeing a huge amount of spread from those premises. In disease control terms, prioritising and using resource to inspect them is not my top priority. My top priority—

Barry Gardiner: It would not be your resource though, would it? It would be the local authority's resource.

Christine Middlemiss: Yes, it is the local authority resource.

Q72 **Barry Gardiner:** There is a problem there that they do not have it. The problem, I would have thought, is more a lack of capacity than the resource that you would control in DEFRA, yes?

Will the current enhanced biosecurity measures have to be made permanent?

Christine Middlemiss: We institute them on a risk basis, as we did last winter and we have done again this winter. We do the avian influenza prevention zone when we get to a certain level of risk, and that is risk of exposure of kept birds to infection in wild birds. We brought that in first on a GB basis and then in England we have brought in the housing order on top of that. That is what we did last year and then we reversed out of it. If you don't do it on a risk basis, it is difficult to reverse out of it. What evidence are you going to use? That is how we do it.

Q73 **Barry Gardiner:** You mentioned co-ordination with the devolved nations and regions. Would there be merit in all four parts of the United Kingdom taking the same approach to controls such as mandatory housing?

Christine Middlemiss: As I said, we do it on a risk basis. If you look at the risk, Wales has had three confirmations all in backyard flocks so far. Scotland is at eight confirmations—it has had more commercial farms—and some in Aberdeenshire. In England, as of last night we were at 122. We have the native wild birds coming inland, which has coincided with where our large kept commercial poultry populations are and for us that has created much greater risk. That is why we brought in the housing order.

Q74 **Barry Gardiner:** Would you say that all four parts of the UK are

operating together on that risk basis?

Christine Middlemiss: On the basis of the evidence they have for their Administration, absolutely. It does make it a more difficult message, I get that, and we do try to do things at least on a GB basis where we can, where we have the evidence, because we appreciate that that communications message is easier, but we have to work from the evidence first off.

Q75 **Barry Gardiner:** Can I ask you a question that? Had I thought about it at the time, I would probably have asked James Pearce-Higgins earlier. Looking at wild bird populations, he spoke of 129 birds possibly representing 10,000 mortalities. What use are you making of satellite data for bird colonies to assess the impact that it has had on colonies? You can get right down to 1 metre square nowadays and it would be very easily possible.

Christine Middlemiss: I am afraid on actual use of satellite data I will have to take that away and come back to you because I don't know how we are using it. I can tell you that there are lots of reports about the Bass Rock, for example, usually being white in the summer and now it is not.

Q76 **Chair:** In terms of registration, did you say that if you sell eggs for money you need to register?

Christine Middlemiss: No. You are classed legally as a commercial flock if you exchange poultry products for money, which can include honesty boxes and things. The requirement to register is if you have 50 birds or more. There will be a consultation going out before Christmas on that for views on requiring all bird-keepers or above a certain number on a registry. Anybody can register; there is no limit. We encourage everybody, even if you have one bird, to register because that way you get the live updates. When I confirm on an evening you get texts and alerts and things to say there has been further confirmations, but the legal requirement at the moment is 50 birds or more.

Chair: Understood, but it would be helpful if people were to get the updates. At least then they would not have an excuse. They would not say, "I didn't realise there was a housing order in place". Thanks very much indeed.

Q77 **Dr Neil Hudson:** David and Christine, I now want to explore APHA capacity and resource issues. You will not be surprised, coming to this Committee, that we ask about that. David, can you give us a feel for how much of APHA's capacity is currently being dedicated to this avian influenza situation? Do you have a feel for how much?

David Holdsworth: Yes. If you look at the whole agency, we have the science directorate and then we have service delivery, which is the bulk of where you would expect the response to be, although it is joined up. You are looking at about 25% of the agency is currently on avian influenza directly. That will grow. The peak we saw in October will have a 90-day lag in terms of licensing and surveillance zone lifts. What you will see is we will require more resources as that starts to hit us. That is what

we are planning for. There are 220 additional staff that we have brought in, for this season, and we have brought 42 locum vets in for the season, given that we are at a 30% vacancy rate, as we have discussed, in APHA because of the shortage of vets.

Q78 **Dr Neil Hudson:** How straightforward or not has it been to bring in people?

David Holdsworth: I won't say it has been easy. It has been challenging and it is an ongoing challenge. I still think there is some challenge in that space, depending on where the disease goes. We are coping and we have coped so far, but what we have to do is try to get in front of it, which is why we have been looking at the disease modelling so that we can plan the operational response and therefore adapt appropriately and bring in resources where we think the model is telling us.

Q79 **Dr Neil Hudson:** You are coping at the moment. I guess my next line of questioning you will not be surprised about, having had a similar line of questioning when I guested on the Public Accounts Committee when we were looking at the APHA resource for the infrastructure. To refresh people's memory, the National Audit Office and then subsequently the Public Accounts Committee produced reports looking at the Weybridge site, the headquarters of APHA, in terms of disease surveillance infrastructure. There is a real need for that site to be redeveloped and there is a figure of money that has been put forward. I think that it is £2.8 billion.

From that report, people have been making recommendations to Government. In the current fiscal climate everyone is making requests to Government for money, but a theme coming across was that you need to spend a bit in disease prevention and surveillance to prevent having to spend billions and billions and billions in the future. We have talked earlier today and in this current panel about the longer-term mental health impacts as well when you get catastrophic outbreaks.

APHA does need to have significant resource put into it. You are coping at the moment, so I guess this is a question to both David and Christine. How confident are you that you would be able to cope if we had something else come in, something like, heaven forbid, foot and mouth or African swine fever or African horse sickness? Where would we be at if then the people, the resources and the infrastructure is challenged to that degree? Where would we be?

David Holdsworth: In resource terms, if you look at Weybridge, we were clear with the Public Accounts Committee that the can has been kicked down the road as far as it can. It cannot be kicked down the road any further or we start to see a degradation of what we can supply in terms of the science and the research, which as you said, Dr Hudson, is critical in keeping the diseases at bay and keeping the diseases out, which is the first aim, or at least enabling us to prepare for them in advance. For Weybridge it is absolutely critical that that investment happens and it continues and we continue to have that commitment from the Treasury.

In terms of resourcing for diseases, as I have said, we have coped. The model is that we stand up and stand down and move our people from BAU research across to outbreak, and the model has worked. The challenge has been the longevity of this. If something else lands, then it very much depends how quickly we identify it and what the scale of it is. If we identify it quickly and we contain it quickly, then my confidence levels are high that we can cope. If we don't identify it quickly and we cannot contain it quickly, then the risks increase in terms of our ability to respond, especially for the likes of African swine fever or FMD.

Dr Neil Hudson: Christine, what would you say to that?

Christine Middlemiss: I would agree. For me, the biggest tension is in resourcing experts in the avian influenza lab and our epidemiologists because they are the people who are critical to our real-time decision-making, what we are going to do on this farm and in this region today and tomorrow to contain disease. It is fantastic that David has been able to bring in locum vets and VDPs and things, but we cannot buy experts off the shelf. They are difficult to recruit generally; it is not just us who find that. Continuing to invest in developing our own pipeline of expertise to sit alongside the Weybridge redevelopment is very important.

Q80 **Dr Neil Hudson:** That was going to be my follow-up question: what do you need moving forward? Coming back to my previous question, could we cope, heaven forbid, if we got something like foot and mouth or African swine fever coming in? Where are we at? Yes, there are locums coming in, but where are we at?

Christine Middlemiss: In the next stage we would trigger the international mechanism where there is an international reserve agreement with New Zealand, Australia, the US, Canada and the Republic of Ireland to get support from them, exactly what we did in FMD 2001. We brought people in and they were a fantastic resource to us. Then also discussions—vets, as you know, are on the shortage occupation list—about how we can bring in more vets from other countries quickly, recognising that they also have disease pressures, with the right visas and get them registered with the royal college.

Q81 **Dr Neil Hudson:** We are like in a war situation. The avian influenza has gone on for longer than normal. In horizon scanning, what are the threats that you are looking at in terms of potential diseases that could then be another front that you are fighting that war on?

Christine Middlemiss: African swine fever has to be top of my worry list. We are at medium risk of incursion of African swine fever at the moment, given the situation across Europe, but it can come in from anywhere in the world if you have illegal products and things. With that, we have identified the human-mediated route, given the big jumps of African swine fever in Germany, as being particularly important. Foot and mouth disease is of lower likelihood but, as we all know, it is of such huge impact that that is always there.

Dr Neil Hudson: We had a scare a few months ago, didn't we?

Christine Middlemiss: Yes, absolutely.

Dr Neil Hudson: It was negative in the end, but that sent shockwaves around the country, didn't it?

Christine Middlemiss: Yes, absolutely. It was a real reminder to us all of what can happen. With the fantastic colleagues in APHA, we dealt with that well. I was very pleased with how that went. There is some degree of exposure constantly so we need to be able to respond.

Q82 **Dr Neil Hudson:** A final question in this section then: what is on your wish list for us as a Committee to try to help articulate that case to Government? What do you need? Christine, you have talked about expertise, epidemiologists and a longer-term supply of these people, and then resource implications. What would you like us to ask Government for for you, bearing in mind you are in there, but so that it is not short-termism, it is long term?

Christine Middlemiss: There is a growing recognition across government of the value of expertise and professionals and changing some of the remuneration packages and things to support that. I would like to see more of that and for it to go faster so that these experts feel that working in Government is a place that they want to be.

Q83 **Dr Neil Hudson:** You are seeing a differential in the salaries for working in that as a civil servant compared to working in private veterinary clinical practice, so that needs to be recognised in some way?

Christine Middlemiss: Yes, or in academia, for example, where we pull many epidemiologists from, that there is an equivalence or even more, that we are playing in the same ballpark so we can attract people.

Dr Neil Hudson: David, what would you ask for?

David Holdsworth: We have had the recognition and we have had the commitment for the investment in Weybridge, which I think is important, but as Christine said Weybridge is world-renowned because of the people and the experts that we have built over 100 years at the site. Both go hand in hand. They do give the UK an ability to punch above its weight in that space, not just for disease prevention and disease protection. I would also say don't lose sight of the soft power. We have 23 international reference laboratories in the UK that set the standards in those disease spaces. That is a lot of soft power on the global stage.

Q84 **Dr Neil Hudson:** It needs £2.8 billion. I think that the Government have committed £1.2 billion so far. Are you still having those discussions with Treasury that you need the extra £1.6 billion committed?

David Holdsworth: Yes, absolutely, and I would say that they are positive discussions. I think that definitely the recognition is there of the need for the investment in Weybridge and how critical Weybridge and its expertise and capability is to the UK's ability to trade, but also to ensure that we stay in front of zoonotic diseases from a public health perspective as well as a trade perspective.

Q85 **Rosie Duffield:** I want to latch on to Neil's questions. We have been doing mental health in rural areas and things like that, and I am wondering if, as you journey through this outbreak, you are identifying the gaps in support that are there at the moment for farmers and smallholders. Is that something that you can report back to DEFRA and do you think that it will provide that support, especially if you are talking about future-proofing for potential—let's hope it does not happen—African swine flu and things like that? Is that something that you think it will take seriously in terms of mental health support and financial support for people who find themselves in a situation they have never been in before and their livelihood is potentially taken away from them? Is that something that you think you can identify?

David Holdsworth: As we have discussed, with our own personnel we have been on a journey in this space, and the support and the adapting has been there. We have a safety, health and wellbeing team that is out in the field with our people who are feeding back to us as a leadership team, who are recommending changes such as the 12-hour driving rule. It is an absolute rule now across the agency that you cannot drive without permission from a manager if you are hitting past that 12-hour point. All those interventions we are building on and we are learning as we are going through. In terms of how we build on that in the farming space and with the farmers we encounter, I think that is something we need to take away and think a bit more about.

Rosie Duffield: Would you say the same, Christine?

Christine Middlemiss: Yes. We have improved since 2001. Our own staff and many of the field staff now have some training in recognising developing issues in the farmers and people they are working with on-farm. We do not have these outbreaks often, thank goodness. There is always more we can learn to do, I am sure.

Q86 **Rosie Duffield:** Are you confident that DEFRA would take up your recommendations in that area or resource things if you needed it to?

Christine Middlemiss: We have not had a discussion, to be honest. Everybody I work with is very aware of the impact of this outbreak and other pressures the industry has, so there is definitely an awareness of it, absolutely.

Q87 **Steven Bonnar:** Thank you very much for your answers so far. It has been very informative. I am keen to find out what your view is on the Government's mitigation strategy for avian flu in wild birds in particular. I am interested to hear what input you both have had into that strategy.

Christine Middlemiss: For me, quite a lot. I work with the animal health policy team all the time, every day, so I have had lots of ongoing conversations with them and they have been inputting my thoughts into it. It is an area we need to look more at, I do not have any doubts about that, because our current policy has all been designed around kept birds. This is a zoonotic disease. People are most likely to get it from contact with kept birds and then it has trade impacts. We have not seen an

outbreak with impact on wild birds like we have until this year, so we need to focus and look more at that.

It is great to hear about the advisory group that has come together, chaired by JNCC. That is right, it should not be an internal DEFRA animal health-led group. It is great that it is leading work and it is a collaborative group. As we heard from the ornithological trust, there is a huge amount of expertise out there that we do not have directly in DEFRA, so we need to work together.

David Holdsworth: My experts, my virologists and my epidemiologists feed through to the policy team who work with Christine and develop that, so it is a very collaborative approach, bringing in experts from right across Government, internal and external.

Chair: It is interesting. We are looking at doing a report on reintroduction of species and in terms of African swine fever it is the wild boar that seem to be spreading it around Europe rather than it being intensive farming.

Q88 **Robbie Moore:** Continuing with the same theme, in your view, do you think that there is capacity to increase monitoring and testing in wild birds? While you are gathering your thoughts, I am thinking more about how independent bodies, independent scientists and birdwatchers can all get involved in feeding into that monitoring capacity that is obviously needed.

Christine Middlemiss: Working together, yes, there is more capacity in getting samples and potentially targeting groups of wild birds and things. We can stand up lab capacity as appropriate, but that is not completely infinite. While the risk to public health is very low and we have guidelines about good hygiene and things, people who are doing it routinely all the time, every day, need to wear personal protective equipment to protect themselves, so that is something we have to work on with NGOs.

Collaboratively, yes, there is. As has been described already, our wild bird surveillance has not been systematic and stratified and designed to tell us about what is happening in the wild bird population as a whole population. It has been about informing us of risk to regions and therefore kept birds. We need to look at what good would look like in that space and design an appropriate programme and then think about how we resource it.

Q89 **Robbie Moore:** Are those discussions happening at the moment? How can we galvanise that?

Christine Middlemiss: It comes back to the advisory group, where we have everybody coming together—those who understand about the wild bird colonies—so that we can design a programme, understand what effective interventions would be, where we need to have them and then what surveillance looks like from that.

Robbie Moore: David, do you have anything more to add?

David Holdsworth: No, I think that Christine has covered it.

Q90 **Robbie Moore:** In your view, is the current division of responsibilities for collecting and disposing of wild bird carcasses working at the moment?

Christine Middlemiss: I hear reports of some areas where it is working well with councils or councils have got NGOs to step in on their behalf through providing funding. In other areas it is working less well because it has not been a priority for them. Councils have a responsibility on public land. Private landowners have responsibility on private land, and we have less information about how well they are doing it or not.

Q91 **Robbie Moore:** Do you think that private owners on private land where carcasses need to be disposed of have enough information available to them? Are they informed enough of how to dispose of carcasses? Is there any need for guidance to be updated in that respect?

Christine Middlemiss: We have recently updated it on gov.uk and feedback on the update has been good. I find that with comms you can always do more of that. Communication for me is a very important part of disease control. It is not just about the technical stuff. You have to be able to have good communication.

Q92 **Robbie Moore:** Finally from me, how do we ramp that up? How do we increase that level of communication out, rather than just updating the website?

David Holdsworth: We have started. We have recognised that there was a challenge and a difference in approach in local authority areas. What we did was set out specific guidance for local authorities, which included if they needed access to RPE or PPE; we at APHA have a stock so we will supply that out. We will train their staff in how to wear the PPE and dispose properly of carcasses. It provided guidance as to, for example, where your rendering facilities are and how you transport to the rendering facilities. While we cannot resolve everything with the resources we have, we have been proactive in providing specific guidance where we have been aware of issues and access to our expertise where we can.

Q93 **Chair:** If I found a dead pheasant or something on my farm, what should I do with it, bury it, burn it?

David Holdsworth: You can call the DEFRA hotline and there is the local authority. The guidance online is to call us, call your local authority, and we will either confirm, "Okay, it is in an area we are interested in so we will collect the carcass for sampling purposes" or we will say, "We have collected samples from that area. You need to go to your local authority and report this because it is their responsibility to collect the carcass". We would always advise the public not to touch dead birds. Even though the risk is low, the advice is always don't touch dead birds.

Q94 **Ian Byrne:** Christine, considering what we have just been through globally over the last few years, and you are on record as saying there is a risk to public health with this, what is the risk and how serious is it?

Christine Middlemiss: We work closely with our UKHSA colleagues and I genuinely mean that. They are in all our CVO stocktakes at my level;

we work with them locally. For this strain of virus they say the risk is very low. When we have an infected premise, we isolate the virus once positive and we do the genomics of that virus. One of the things we look at is whether it is becoming more humanised, and it is not so far. Where there is ongoing sustained contact with infected birds, then there have been people infected. We had one last year and there have been cases in Spain. The risk remains very low, but if you left and did not control the infection and it was passing through lots of birds and lots of human contact, then that is where you get the risk of the virus changing more quickly and creating a human outbreak.

Q95 **Ian Byrne:** That is being monitored, is it?

Christine Middlemiss: Yes.

Ian Byrne: You are happy with the monitoring element of it?

Christine Middlemiss: Yes.

Ian Byrne: Would you like to come in on that, David?

David Holdsworth: No.

Q96 **Ian Byrne:** When we are talking about what the Chair has just talked about, dead birds being left, what is the danger to dogs or different animals within the system?

Christine Middlemiss: If they scavenge on dead infected birds—and we talked about how long the virus can survive—then there are noted occasions, foxes, for example. We have tested one or two foxes, I think it was, in a wildlife centre last year that had infection. There are reports in other countries. Where mammals can scavenge on infected birds they can become infected, but it is not having a big impact on other species in that way. It is all about potentially scavenging. They seem to recover.

Chair: Thank you very much indeed. That was a very helpful session. I think that we are much wiser having heard from proper experts. This place, this building, is full of people who are not proper experts, but there you go. Thanks very much. Could you please pass on the very complimentary comments that were made about your staff? I am sure that sometimes it is a very thankless task going on a farm and destroying somebody's livestock and potentially their livelihood, so it is much appreciated. Thank you very much indeed.