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Members present: Lord Teverson (Chairman); Viscount Hanworth; Lord Krebs; Duke of Montrose; Lord Rooker; Lord Selkirk of Douglas; Baroness Sheehan; Earl of Stair; Viscount Ullswater; Baroness Wilcox; Lord Young of Norwood Green.

Evidence Session No. 1    Heard in Public    Questions 1 - 9

Witnesses

I: George Eustice MP, Minister of State for Agriculture, Fisheries and Food, Department for Environment, Food and Rural Affairs; Helen Wakeham, Deputy Director for Water Quality, Groundwater and Land Contamination, Environment Agency; Jan Dixon, Deputy Director for Water Quality, Department for Environment, Food and Rural Affairs.
Examination of witnesses

George Eustice MP, Helen Wakeham and Jan Dixon.

Q1 The Chairman: This is a question and answer session with the Minister about the Nitrates Directive. I remind members to declare any interests that they have when they first speak. I am a trustee of the North Devon Biosphere Foundation and a board member of the Marine Management Organisation.

The session is being recorded and transcribed. A transcript will be sent to Defra, and, if there are any inaccuracies, please come back to us. This is a public session that is being webcast.

Minister, welcome back to the Committee. We also welcome Helen Wakeham and Jan Dixon. First of all, please introduce yourselves for the public’s benefit.

George Eustice: I am the Minister for Agriculture, Fisheries and Food.

Helen Wakeham: I am Deputy Director for Water Quality, Groundwater and Land Contamination at the Environment Agency.

Jan Dixon: I am Deputy Director for Water Quality at Defra.

Q2 The Chairman: Perhaps we could start with a very general question about your assessment of how well the UK has implemented the EU Nitrates Directive. To give a little background, we have had quite a bit of correspondence with yourself and the Department. We were concerned at a number of indicators that came back from that, such as the direction of flow of nitrate concentrations and the amount of reporting that was going on—hence, why we are here today. Perhaps you could give us a bit of background from Defra on your point of view, George.

George Eustice: Of course. We think we implement the requirements of the Directive well. Since the 1990s, we have had a methodology whereby we look at all water courses over the 50 milligrams per litre threshold set under the Directive and all the landscapes in that water catchment, and we have brought them under an NVZ—a Nitrate Vulnerable Zone. Currently, around 55% of land in England is covered by one of those zones, and we review it every four years. Most recently, we reviewed it in, I think, 2015 or 2016; I might be corrected on that. That has given us our current NVZ proposals.

The other thing to recognise is that fertiliser applications have gone down quite significantly for a number of reasons, principally cost, over the last 30 years. Fertiliser use has gone down by something like 40% during that period, and we have seen trends going in the right direction. Since 1998 to now, surface water nitrate levels have gone down by about 22%. There is a slower reduction in groundwater because we are still bearing the consequences of fertiliser application in the 1970s and 1980s in some of our groundwaters, and it is a much longer-term endeavour to get that trend reversed, but in most areas it is moving in the right direction too.
The Chairman: We are going to go into a number of those areas. Without, hopefully, getting ahead of the other questions, I take the point about the amount of time that it takes some of these waters to get down through the geology and, therefore, it can be years. Is that not the case generally for everywhere in the rest of Europe as well? Do we have a very different geology here that makes it even more long term?

George Eustice: I am not sure whether our geology is that different or not. Helen might be able to say whether it is.

The Chairman: I suppose I am just trying to find out whether that is an excuse.

George Eustice: I am not using it as an excuse, because the critical thing is what action we take now to address the challenges. Just last year, we introduced the new basic rules on agriculture that require farmers to test their soils regularly and to have a soil management plan. We are constantly trying to refine our regulatory approach.

This afternoon we have the Second Reading of the Agriculture Bill, which sets out very clearly that soil health and environmental outcomes, including water quality, will be absolutely at the heart of the future incentives framework. What matters is the action we take now—literally today in the case of the Agriculture Bill—to progress policy and get trends moving in the right direction, but, ultimately, we cannot change our geology. Some of the, perhaps, mistakes during the 1970s and 1980s with overuse of fertiliser are still there, and we cannot reverse that.

The Chairman: Helen, I think you were going to say something about geology, without getting too technical.

Helen Wakeham: Yes. The geology of the UK is really complex. Where we see some trends still increasing, with nitrates in groundwater and in rivers fed by groundwater, it is generally in the south-east of Britain where we have chalk geology, and it is taking a long time for that slug of nitrogen that was applied between the Second World War and the 1980s to come through. So, geology is a real factor.

Of course, that affects the farming that we do. Some of the challenges in southern England are very different from those in highland Scotland just because of the intensity of the farming, which is based on the capacity of the land, which is based on the geology. Geology is a real factor, and you can see that across the reports of the Nitrates Directive’s success across Member States. The issue applies in other places.

The Chairman: Presumably it is similar for a lot of the rest of Europe.

Helen Wakeham: Absolutely. Denmark, for example, sees some of the same challenges as we see.

Viscount Hanworth: I understand that the south-east has a lot of chalk, and chalk is fissured and porous in comparison with shale further north. Are you saying that the transport through chalk is slower?
**Helen Wakeham:** Transport through some of our geologies is much slower.

**Viscount Hanworth:** Which ones? I want to clear up the confusion in my mind.

**Helen Wakeham:** The picture of permeable/impermeable rocks in Britain is very complex. Some are fissured and some are not; some go to tremendous depths and some do not. Generally, deep geology is where there are lots of layers of permeable rock that will take much longer to see the effect than some of our—

**Viscount Hanworth:** What is the particular affliction of the south-east?

**Helen Wakeham:** It is a mixture of chalk, sandstones and greenstones, all of which hold water and pollutants for a long time.

**The Chairman:** We will cut out there for the moment.

**Helen Wakeham:** We could supply a little more on the geology, but the best source of information is the BGS.

**The Chairman:** Do not worry about that. We are trying to understand the delay factors and I think we have gone through them. We will go back to some of the other issues.

**Lord Selkirk of Douglas:** I should mention two interests. One is indirect: one of my sons is involved in a project to produce a very pure form of water. The more direct interest is that I am president of the International Rescue Corps, the purpose of which is either to save lives or to prevent loss of life. The Corps is very much involved in, for example, flooding, such as when the Thames flooded some time ago. I mention that as a background factor. The people the IRC employs are paramedics and firefighters.

I have two technical questions, so I will put them together. What percentage of monitoring stations in each of the four nations of the United Kingdom do you expect to report increasing trends in nitrate pollution at the end of the current reporting period? Do you think it is possible for the United Kingdom to achieve concentrations of lower than 50 milligrams per litre in all of its waters?

**George Eustice:** Let me touch on the second point, and for the first one on sampling, which is very technical, I will refer to Helen. We have in our 25-year environment plan a commitment to get all, or 75%, of our water courses near their natural state. That implies that, to get water courses near their natural state, we want to get well below the 50 milligrams per litre target—the genesis of which was, as you know, a World Health Organization target set some time ago. We have not put a specific figure on it, but that general commitment in our 25 year Environment Plan would imply that, yes, we believe it is realistic and possible to get a good chunk of our water courses below 50 milligrams per litre.
Helen Wakeham: On the detail, there is a short answer and potentially a very long answer about trends. The short answer is that there is a slow but steady decrease in nitrates across our water bodies—groundwater, surface water and coastal bodies—and that is happening in all four countries of the United Kingdom. Underneath that one-liner, there is a great deal of detail.

For all four countries, mostly our nitrate levels remain stable. There are some decreases and some increases in our groundwater and surface water, but the net trend is downwards. There will be some very local areas where there is an increasing trend or a decreasing trend. All the information related to that was part of the Explanatory Memorandum that was sent. Is that sufficient?

The Chairman: Do you want to comment, Ms Dixon?

Jan Dixon: I do not want to add anything.

The Duke of Montrose: I declare an interest as a livestock farmer and a former president of the National Sheep Association—all the chemicals to do with agriculture. You were talking about wishing to return to natural levels. Is there a way of distinguishing natural levels of nitrogen and added nitrogen, and does it matter? What would be the natural level?

Helen Wakeham: Under the Water Framework Directive in the UK, we do not set a standard for nitrate in surface water, specifically for the reason that it is not very easy to derive what would be a natural level. Actually, the things that affect biodiversity in surface waters related to nutrients tend to be phosphorous related, so we would not create an environmental quality standard for nitrate in surface water for that reason. There are certainly things that we can do to step towards it if we take a holistic approach to managing pollutants in water.

As you say, the issues that we face are not just nitrate: they are phosphate, chemical, et cetera, so the approach we are taking through the Water Framework Directive is through river basin planning to find the best methods of controlling all those pollutants as a whole rather than looking at one substance in isolation.

The Duke of Montrose: Do we have in mind a sort of bracket that, naturally occurring, there are 10 milligrams, or whatever they are, per litre in the natural situation, or 10 to 50? Where is it?

Helen Wakeham: For nitrogen, we do not set one.

The Duke of Montrose: No, but do we have a clue where we are, because I think you measure all nitrogen, both natural and additional?

Helen Wakeham: Yes, we do.

The Duke of Montrose: So we do not quite know where we get to when we get down to purity.

The Chairman: What we want to try to do is get to 50 to start with, and
I suppose the $64,000 question is when you think we are going to get to that in 90% of our stations or whatever. That may be the key.

**Helen Wakeham:** For England, only 14% of our monitoring stations are above 50 now, so we are well on the way, but there are places where it will take 50 years to achieve that result.

**Jan Dixon:** Our River Basin Management Plans, which are holistic plans for dealing with the combination of factors that bear on river basins and water courses, are conducted individually by river basin, so they are as locally sensitive as they can be. They look at all the different factors that apply to a particular river basin and try to come up with the best possible objective and the means of getting there that suits that particular river. The combination of issues that bear on that will vary. We try to be as localised as possible and get the best possible combination of factors bearing on water quality.

We are just at the beginning of the next consultation phase that will derive our third cycle of River Basin Management Plans. The first of a suite of consultations to inform those is open now. It is a dynamic area where we are constantly looking to see the best possible levels we can expect in different river basins.

**Viscount Hanworth:** I understand there is an annual cycle in nitrate concentration and surface water concentrations, and they reach their peak in the summer months. I presume that surface waters are the predominant contribution to drinking water, at least in the south-east, so how often do our drinking waters breach WHO limits, and what penalties, if any, are imposed on the suppliers if they do? Beyond that, what sort of recourse do water suppliers have to extract nitrates if the levels are exceeded?

**George Eustice:** I will make a general point and then Helen can pick up on the specifics. I suspect the reason it goes up slightly in the summer is that obviously in the Nitrate Vulnerable Zones you are not allowed to spread any manures at all during the winter months, which, paradoxically, has the effect that, when spring arrives, farmers get on the fields and spread manure, and during the growing season they are also more likely to put fertilisers on—but Helen might pick up on that point. There is a legal requirement on all water companies to remove nitrogen where it exceeds the limit and there is an enforcement regime around that.

**Helen Wakeham:** That is exactly right. No water is supplied at above 50 milligrams per litre. Water companies either treat water that is of higher nitrate concentration, blend it or close sources and open other sources, so no drinking water is supplied at that limit.

**Viscount Hanworth:** The limit is very firm.

**Helen Wakeham:** It is very firm, yes.

**Lord Rooker:** I was not going to comment on this, but in our pack there is a map of the mean nitrate concentrations, and the river and lake sampling points 2011 to 2015, with all these lovely coloured dots. It is
self-evident that only 11% of the land of England is developed. Most of it is not developed; we have loads of land. If you take those sampling points and look at where the red dots are—the above 50—they are all over the place. They are not just concentrated in the south-east; they are up the spine of England. There are clearly hundreds of sampling points, so going back to the original question, are any of them in non-agricultural positions? It comes to the point about what the natural level is when we have not been putting fertiliser on the ground. Would it be possible to know that from the sampling points on this map?

**George Eustice:** Yes, almost certainly.

**Helen Wakeham:** Yes. The sampling points do not just cover agricultural areas. The number of dots is not representative of the size of the problem because there are far more monitoring stations in England and Wales than there are in Scotland and Northern Ireland. That is the first thing. Those monitoring stations will also be picking up nitrate in non-agricultural areas, so they will be picking up issues arising from sewage effluent, for example. They might also be picking up issues from aerial deposition of ammonia in upland lakes. It illustrates the complexity of the problem.

**George Eustice:** Our estimate is that a little over half of the nitrate pollution that we have comes from agriculture, but between about 25% and 30% probably comes from water companies. The reason why agriculture is often focused on is that it is the area where it has often been hardest to get progress, particularly with dairy farms. With the average holding getting larger, it has caused some pressure and issues with infrastructure, whereas there has been progress by the water companies, with investment over decades to improve things, but they still have quite a bit further to go.

**Lord Young of Norwood Green:** The annexe to your letter says: “Waters used for drinking water abstraction, either surface freshwaters or groundwater, are monitored and if found to be at risk from nitrates e.g. if nitrate concentrations are found to be rising, action plans are developed aimed at reducing the source of nitrates [Safeguard Zone Action Plans]”. What do they do to reduce the source, rather than the water companies filtering out the nitrates?

**Helen Wakeham:** Generally, those are the measures within the Nitrate Vulnerable Zones, so the Nitrates Action Programme picks up the actions we require of farmers in a locality, but that is only part of the picture. Jan alluded to the Water Framework Directive River Basin Management Plans. They may also have actions in them. There are also 100 catchment-based approach co-operatives operating in England, and, within those, farmers, water companies, other operators and Local Enterprise Partnerships will come together to put in place actions and mechanisms to control pollution, which will include nitrate.

**Lord Selkirk of Douglas:** Are the civil services in England, Scotland, Northern Ireland and Wales all working quite closely together?
**George Eustice:** Yes, I would hope so. Some water courses straddle two territories, so there is usually an approach where one, either a devolved Administration or in England, Defra, will take the lead for managing that particular water course and co-operate with the other devolved partner in doing so.

**Jan Dixon:** At an overarching level, we talk to each other while still respecting the fact that this is a devolved matter.

**Helen Wakeham:** As do the five agencies. There is a delivery body relationship as well that shares best practice.

**Baroness Sheehan:** Is the predicted increase in nitrate levels in groundwater inevitable, or could steps be taken to counteract the effect of historic nitrate applications reaching the water table?

I have a second question, which is about the timeframe. We heard about huge amounts of fertiliser usage after the war. I think it peaked in the 1980s and 1990s, and we are coming to a period when we hope to see that historical application decline. Are you seeing any evidence of that? Hopefully, it will be the next decade or two, given that we have read that it takes 60 years to filter through. When are we going to see the end of that?

**George Eustice:** My understanding is that we are already starting to see—

**Baroness Sheehan:** Could you answer the first question first, about the predicted increase?

**George Eustice:** As to whether it could be reversed, in general, it is declining already, but, as Helen pointed out earlier, there will be some geologies where there may still be concentrates and you may still see some increases, basically, that are a consequence of fertiliser applications in the 1970s and 1980s.

**Baroness Sheehan:** Is the predicted increase inevitable? We keep being told that we are going to see increases in nitrate levels for historical reasons.

**Helen Wakeham:** Yes, it is inevitable because it is already there, sitting in the geology and making its way through the geology. Unfortunately, there is no way to address what is already there. What we can do is put measures in place to stop additional nitrogen being added at the top of the system.

**Baroness Sheehan:** Is that happening? Minister, I think you said that we are beginning to see a decline in the historical levels, yet we are seeing an increase in nitrate levels in groundwater. I cannot get my head around that.

**George Eustice:** Yes. There has been a 22% reduction in surface water, because that tends to be more immediate.

**Baroness Sheehan:** Let us concentrate on groundwater.
George Eustice: On groundwater, my understanding is that the trends are generally downward but at a much slower rate, because it is taking longer for the reasons we pointed out. As Helen said, there will be pockets and areas where it will continue to rise just because of the geology. I think that is probably fair.

Helen Wakeham: Yes, that is exactly right.

George Eustice: I do not know if we know at what percentages it is still rising, do we?

Helen Wakeham: We do know; it is in the Memorandum.

George Eustice: Perhaps we might write to the Committee to say at what percentage it is still rising and is expected to rise. I think the answer is that it is not inevitable that it will rise across the board in the groundwater, because in many groundwaters it is already declining and we expect it to continue to do so.

Helen Wakeham: The trend from 2008 to 2015 was 26% still increasing, and 28% declining, in groundwater.

Baroness Sheehan: Are there any steps that we can take to mitigate the effect of the historical nitrate applications?

Helen Wakeham: No, because the nitrate is still working its way through the geology. As to drinking water supply, all we can do is continue to treat or blend, and, as I said, prevent the situation getting worse by preventing more nitrogen being applied and therefore affecting future groundwater supply.

Lord Krebs: Could I follow up that last point about nitrogen still being added? As I understand it, roughly, there are three ways that farmers could add nitrogen. They can add ammonium nitrate fertiliser, or manure, or they can grow legumes that fix nitrogen. Do those three methods of adding nitrogen have different consequences for surface water or groundwater levels, or is nitrogen nitrogen?

Helen Wakeham: Nitrogen is nitrogen. It does not matter how nitrogen is applied; it is very leaky. If we compare it with the other major plant nutrient, phosphorous, that adheres very strongly to soil particles, so if you put it on to the ground it stays there. Nitrogen, however it is applied, does not attach to soil particles and leaks out, so rainfall or—

Lord Krebs: You think the claim that organic farmers make that adding nitrogen in the form of manure would be better for our water quality is fallacious.

Helen Wakeham: It is not necessarily true. The trick is to match the nitrogen applied to the need of the crop, and that is equally relevant in conventional and organic farming systems.
George Eustice: Having been a farmer, the chemistry is very clear: nitrogen is a leachable nutrient. Where organic farmers might have a point is that an organic manure is likely to release nitrogen more gradually, so it could be a slower release in some cases. There is also, to be blunt, a bit of a difference between slurry that is put out, which is readily available, and farmyard manure that is mixed with straw with its water-retaining qualities; its impact on the humus in the soil can be a factor, and has an added effect other than just the NPK nutrient that goes in.


Viscount Hanworth: Presumably, bare fields with nothing growing on them are liable to leach nitrogen much more quickly than something with cover. Is it appropriate to recommend that fields be planted with grass or whatever?

George Eustice: Yes, and we do. In our Countryside Stewardship Pillar 2 Schemes there are options, for instance, that we financially incentivise to have cash crops or cover crops that basically prevent soil erosion and ensure that nutrients do not leach during the winter months.

Jan Dixon: The farming rules for water, which came into effect earlier this year, as the Minister mentioned at the beginning, have a set of helpful points that all farmers are asked to consider when considering their nitrate programme. They include risk factors for leaching, such as whether or not you have a cover crop, the slope of the field, the soil type and the level of nutrients already in the soil. That is all set out very clearly in what we hope is an easy to understand way that farmers can apply to reduce the risks specific to their own sites as far as possible. That is the sort of thing that catchment-sensitive farming advisers also support. It is a way of juggling the different kinds of factors you talked about at the beginning of your question for the best possible outcome.

Baroness Wilcox: I declare that I am president of the National Consumer Federation and that I am a founder of the National Lobster Hatchery in Cornwall. We have some information that is very interesting for me because it talks about money and consumers, and that is always a bit of a worry, but I will start with the question given to you.

What assessment have you made of the impact of the UK’s nitrate levels on human health and on fish stocks, and the costs for water companies and consumers to remove nitrates? They have written to tell us that £189 million was spent by English water companies between 2004 and 2009 to remove nitrates from the water supplies, and those costs are passed on to water consumers. How much are we looking at?

The Chairman: We offer you the answers as well as asking the questions.

Baroness Wilcox: Give them a chance. Heavens above!

George Eustice: The reality as to the impact on human health is that we think there is no impact because we have confidence in the regulatory regime that requires water to be treated. As Helen said, it either has to be
blended or treated to remove some of the nitrogen where it is over. Obviously there is a cost to the water companies, which eventually ends up being a cost on water bill-payers. In their management plans, all water companies work to improve infrastructure, for instance, on sewage handling, which can be a source of nitrates as well. Again, as part of their pricing plan, that finds its way into consumers’ bills. It will vary from water company to water company, but we do not think there is an impact on human health.

We have not done any kind of formal analysis of the impact of nitrates on fish, but, generally speaking, if you look at our fresh waters, there are bigger challenges for fish stocks than nitrates. Salmon, for instance, have all sorts of problems, such as issues with the sea part or marine part of their lifecycle—predation, obstacles and barriers, such as weirs that do not allow fish passage. There are many other pressures on our fish stocks, particularly some of the salmonids, than those we would expect to get from nitrates. The only exception is that a serious problem with eutrophication can take oxygen out of the water and have some impacts, but that extreme issue of eutrophication is now much more limited.

**The Chairman:** I was at Plymouth Marine Laboratory two weeks ago and this came out. There was concern about the outfall, particularly, as you say, in the springtime when everything gets taken out that was not allowed over the winter. There was real concern not just about the fish stocks but about the ecology of coastal waters. Is that something on which there is any evidence?

**George Eustice:** There is a slightly separate issue, obviously, with shellfish such as mussels, which we see, for instance, in the Fal in Cornwall. If there are heavy rains in the spring and run-off of farmyard manures in particular into the water, it can have a separate effect, which makes the mussels unmarketable because of pollution and the health risk from that. It is slightly separate from the nitrate problem. There are sometimes issues with the build-up of nitrate concentration around the shore in the marine environment.

**Helen Wakeham:** Some of our Nitrate Vulnerable Zones are designed specifically to tackle eutrophication in coastal waters. It is a pretty unusual problem for the UK, but there are some sheltered, shallow estuaries where there are issues with eutrophication, which is caused by a mixture of nitrogen and phosphorous inputs. Some of it is related to agriculture. More is related to water company activity. As part of the periodic review of water companies’ pricing, every four years we ask them to put an environment programme together to improve treatment at waste water treatment plants.

**The Chairman:** Could you be more specific about the water company activity? What particularly?

**Helen Wakeham:** Waste water treatment is principally the issue. Where a large waste water treatment works goes into a shallow estuary, we require a higher level of treatment, and that works its way through the
periodic review of water companies’ pricing. Water companies make improvements on that basis. They may also choose to pay farmers to reduce nitrogen inputs in the relevant catchments, which helps to reduce the impacts on coastal waters.

**The Chairman:** Thank you. Are you okay with that, Baroness Wilcox?

**Baroness Wilcox:** Yes, I think so. It is deeply tricky. We have had to move our little tiny baby lobsters away from the farmers. Forgive me, but what they chuck down into the water for us to try to work with is pretty tough, so we do not regard them as our best friends when it comes to trying to grow lobsters, and we start moving around. We will see a lot of people and elements such as that moving around to try to avoid even being near those positions. I have just come back from the Arctic. We have been there to look at the water to see what is going on. It is a long way away, but we were amazed at how many people are up there looking at what is going on in the water. The water moves.

**The Chairman:** Thank you.

**Jan Dixon:** Can I add one point that might help? The current round of water industry environmental plans is live at the moment. I do not know if you have had the chance to follow it. The Environment Agency set out its ambition for the next period of water industry environmental management earlier this year. The water industry was then invited to submit its plans about how it will achieve those objectives, which obviously include impacts in coastal waters. Those plans have been submitted and they are being reviewed, I think, by the Environment Agency, and then by Ofwat. That process ensures that they come up with adequate and robust concrete proposals to bear down on some of the points you mentioned, and that they get the best possible balance between the costs of fulfilling their environmental duties while making the best possible offer to consumers. They are seized of the costs of the investment they need to put in and they want it to be as cost effective as possible so that they only have to pass on essential costs to consumers. Sometimes that leads to discussions about the best way of achieving those objectives. Helen mentioned the compensatory payments that some water companies have chosen to make to farmers to reduce the incidents of nitrate at source, which is more cost effective for water companies in some cases than building an expensive treatment plant that may not come online until a bit later. It is a live issue.

**Baroness Wilcox:** That report is being done now. Is that what you have just said?

**Jan Dixon:** The Environment Agency’s ambition for the next stage, which runs from 2020 to 2025, has been published, and it is currently assessing the water industry plans for how it wants to achieve that. There will be more information once that assessment is complete.

**Helen Wakeham:** The ambition is set out in a document called WISER, which we can supply to you. The water companies are putting together
something called a WINEP, which is the Water Industry National Environment Plan. Those draft business plans are with us and Ofwat at the moment for review, but we expect something in the region of £5 billion-worth of investment in environmental schemes over the next five years.

Lord Young of Norwood Green: An EU Pilot investigation raised concerns about the Nitrates Action Programmes in the UK. In the Minister’s 3 July letter, he explained that the Commission questioned whether sufficient legislative measures were in place in England to meet the Directive’s objectives and that he is “continuing to engage with them on this matter”. What concerns did the Commission raise in its Pilot investigation, and, following on from that, what concerns remain outstanding, and are formal infringement procedures expected?

George Eustice: The Pilot procedure is basically a process that the Commission goes through before considering whether or not to proceed with infraction. It is always a bit uncertain what its concerns are because it requests information as part of the process. It does not set out its concerns explicitly; it is more that it asks for information about what we are doing now.

It is important to note that the Commission initiated this procedure prior to the introduction of our new basic rules on water. There are certain things that we have done and requirements that we have put in place, including requirements for soil testing and for farmers to have a plan about using manures with lower levels of nitrogen content. It may be that the Commission initiated the process before that was put in place, so we have given it all the information on those new basic rules.

Our view is that infraction would be unjustified. We think we are satisfying the requirements of the Directive and that, in so far as the Commission might have had some concerns two or three years ago, which it alluded to, the new basic rules for water have addressed them. We expect there not to be infraction proceedings, but it is a judgment that the Commission would have to take.

Lord Young of Norwood Green: Annex 3 says: “We note that compliance levels amongst farmers varies across the UK and that in England it has fallen from 95 per cent to 77 per cent.” What assessment have you made of the reason for this decrease? Is that a matter of concern to you?

George Eustice: It tends not to be, because the vast majority of the compliance issues are not actually failure to comply with the substance of the Directive or the NVZ requirements. People may not have kept their records in quite the way that the Commission would like, so it is a sort of administrative flaw in the vast majority of cases rather than an actual breach. In those cases, we tend to give advice to farmers, and give them a warning and improve things that way, rather than taking heavy-handed enforcement action for what, at the end of the day, is usually a relatively trivial recording issue.

Lord Young of Norwood Green: Is that approach working, or is it too
soon to say?

**George Eustice:** Helen leads that enforcement team.

**Helen Wakeham:** Although it sounds the wrong way round, the first thing to say, as a regulator, is that the increased level of non-compliance is a good thing. It indicates that the targeting of our enforcement effort and the information we share with the Rural Payments Agency is working; we are seeing higher levels of non-compliance because we are visiting the farms that are non-compliant.

**Lord Young of Norwood Green:** Your detection is improving.

**Helen Wakeham:** Our detection rate is improving. Yes, our experience is that giving the right kind of advice and guidance really does work. Where we have enhanced ability to give the right kind of advice and guidance—for example, in catchment-sensitive farming areas—we know that farm practice and water quality improves. In general, when we need to take enforcement action, we prefer to take it in the very serious cases where pollution is occurring, as opposed to record-keeping breaches.

**Lord Young of Norwood Green:** I have this lay person’s sort of view, and I might be wrong, that technology now enables farmers to target the application of fertilisers more accurately. How much is that playing into the equation? Are you seeing an impact from that?

**George Eustice:** It is early, but you are absolutely right that, going forward, it is a key part of the solution. As agri-tech advances, we can have GPS mapping of fields and can vary the amount of fertiliser that goes on to different parts of the field, recognising where there is a need for nitrogen and where there is not. The accuracy with which we are able to apply nutrients is getting better all the time. The more accurate and judicious we can be about the way we use artificial fertilisers, the better.

**The Chairman:** Lord Rooker has a question, but then we need to make some progress.

**Lord Rooker:** I fundamentally disagree that, just because you do not keep the records right, it is not as serious as a proper breach. That is the excuse throughout the ages. It happens in food safety: “Oh, it’s only the paperwork. We’re doing everything okay”. The point about record keeping is crucial. When problems arise, you can investigate. If the records are not kept properly, how can investigators ever find out what is going on if there is a catastrophe or some serious issue?

I do not think we should be relaxed when people cannot keep records. They should be hit just as hard as when they are responsible for a proper breach of the practicalities. Why are you so relaxed about the fact, “Oh, they do not keep the paperwork; it is only administrative and it doesn’t really matter”? It is fundamental to have those records.

**George Eustice:** We may have to disagree. My general view on all these things is that we should have a proportionate approach to sanctions. If a
farmer goes out in the middle of winter when there is a torrent of rain and
spreads tonnes of slurry and massively breaches the maximum limits, it is
obviously going to cause a water pollution incident. If he abides by all of
the requirements substantively, in that he is not doing that but he forgot
to fill out the record in quite the right way on quite the right day, yes, it is
a breach, but, in my view, a less serious breach, and we should have a
more proportionate approach.

One of the problems we have quite often with EU law is with sanctions that
are hard-wired into the regulations, which means we have a lot of
disproportionate sanctions for often quite trivial offences. What I would like
to get to in the future is proper sanctions for offences that are a real
problem and that are causing pollution, but a more proportionate and
sensible approach on minor offences, and I would put some of the record
keeping in that zone.

**Lord Rooker:** How do you know, though, that someone who has a culture
of not keeping their records properly is not keeping proper records of the
chemicals they are using and the medicines they are using on their animals
because they think it is only administrative, it does not really matter and
it is not serious? It is a cultural issue of not keeping records.

**Helen Wakeham:** I agree with that to an extent. The Regulators’ Code
says we need to be proportionate and to make appropriate interventions.
For most record keeping, an appropriate intervention is support, advice
and guidance. Where we find that kind of breach, it tips us off to go back
and look again, so we would not accept repeated failures to keep records.

**Lord Young of Norwood Green:** It is the yellow card first.

**Helen Wakeham:** As you say, Lord Rooker, if records are not being kept,
how can you tell what else is going on? I do not think it is a dismissal of
that, but it is an indicator that there is something else going on.

Possibly the other thing to mention is Dame Glenys Stacey’s review of farm
regulation and inspection. There was an interim report in July, which talks
about independent regulation in a single field force, and I think that will
help to identify places where individual businesses are failing on the
environmental and food safety front, et cetera. All of that information,
whether or not we take enforcement action when we see a reporting
breach, helps us to build a picture of the compliance and the competence
of the business. I think that is the way forward.

**The Chairman:** I think we have covered the next question; they naturally
went together. Perhaps we could move on.

**Viscount Ullswater:** I declare an interest. I am a trustee of an estate in
Cumbria that has interests in farming, forestry and energy.

I would like to talk about the UK’s derogation from the Nitrates Directive.
First, why does the UK need derogation from the maximum amounts of
nitrogen from livestock manures that is allowed under the Directive? Is it
mainly dairy cattle or is it from pigs? I notice there are now far more
extensive pigs than intensive pigs. How long do you expect the derogation to last, or does it just fall away at Brexit? Have we incorporated the Directive in our own law and do we then expect a derogation from our own law?

**George Eustice:** On the latter point, all of this will come across as retained EU law under the EU (Withdrawal) Act, so all the existing mechanisms will be there, and derogations will be there to be used should we judge that to be necessary. It is mainly dairy farms. Around 2,000 dairy farms would qualify, but only a relatively small number—around 300—take it up. The reason we have it is partly a risk assessment of its impact; we think that actually the risk is very low because it tends to be on more extensive systems where they rely on grass and grazing quite a lot, and, if we did not allow that, it would effectively severely compromise their ability to run a grazing-based livestock system.

The other thing is that it is an exemption that is used, generally, for applying manures of a slightly lower nitrogen content, when they are diluted with a lot of water, and we think, therefore, that there is a low impact and there is not much evidence that it affects overall nitrogen going in. I am not sure whether that has covered it.

**Jan Dixon:** For a farmer to qualify for the derogation, they have to have 80% grassland, and if they are granted the ability to act under the derogation, they must comply with additional land management practices to ensure that the impact of the increased nitrate load they are allowed to apply is not detrimental. That is monitored continuously. Indeed, the derogation is only granted annually, so it is not a rolling derogation without review at every stage.

**Helen Wakeham:** The number of farms taking advantage of the derogation is very small. It is about 300, and we cannot see any evidence in monitoring data that water quality is affected by that derogation.

**Viscount Ullswater:** How does the application of the derogation, which I understand will now continue, or will be available to be continued with, relate to the Government’s commitment in the 25 year Environment Plan to limit the use of nitrogen-rich fertilisers and reduce water pollution from agriculture?

**George Eustice:** Our starting point on this is obviously that all the existing retained EU law will come across through the various SIs linked to the EU (Withdrawal) Act. We actually see the principal devices for delivering our environmental objectives across the board, in the future, as a complete recasting of agricultural support so that it is supporting sustainable agriculture.

A lot of the incentives we will be seeking to put in place will be all about improving infrastructure for managing farmyard manures and slurry, reducing ammonia emissions, incentivising more accurate use of nutrients, better attention to soil health and so on. If we get that right, that is how we will deliver the progress we really want to see. Our starting point is that
we are not going to remove any of the protections currently in EU law, but my ambition is that in 10 or 15 years’ time people will look back and almost see the existing EU infrastructure as a bit redundant because what we have done of our own accord since has superseded it.

**Viscount Hanworth:** Presumably you have this Defra document. Can I ask for an interpretation of figure 1, which shows that the nitrate application on grassland has diminished quite radically? How does that relate to the derogation we have just been talking about? First, could you explain what is happening, whether it is chemical fertilisers or slurry that is being applied to grassland? Why has it diminished so radically?

**George Eustice:** I can get a specific answer, hopefully, from one of my colleagues. Overall, nitrogen applications have reduced by about 40% over the last 30 or 40 years, since the 1980s.

**Viscount Hanworth:** On arable land it seems to be absolutely level. The decline is on the grassland.

**The Chairman:** Let him reply, please.

**George Eustice:** It has declined overall. We have seen genetic advances, so a lot of work has gone on in recent years to breed commercial seeds of grass that are deeper rooted, that effectively scavenge and make more effective use of nutrients so that you do not need to apply quite so much. There are a lot of technical advances just in the genetics around commercial grasses that enable people to farm with less exogenously applied manures, and probably a return to clovers and clover mixes, and more traditional approaches to husbandry such as that. We have tried to incentivise some of those approaches with leguminous nitrogen-fixing grass-seed mixes being incentivised through the Pillar 2 Schemes.

**Viscount Hanworth:** Can I ask about a related point that has not yet been addressed? In consequence of what we see here, it seems to me that the derogation for dairy farmers is redundant, because we are talking about the very substance that feeds their animals.

**George Eustice:** Yes, but it is partly a management issue for them. If you did not have it, it would severely compromise their ability to run their holdings, because they have to have a way of getting those manures out, and to have storage capacity for all of the water; every bit of washing water they might use to clean the yard becomes incredibly difficult and problematic.

**Q8 The Earl of Stair:** First, I declare an interest as a dairy farmer partially in an NVZ. I cannot really comment on why it is partial; that is down to the civil servant who drew the line in the mud.

Given the scale of the problem and the increasing rate of nitrate levels, do you believe that in the UK we have the correct balance between voluntary and mandatory actions to reduce water pollution from nitrates to meet the requirements of the Directive, and what assessment have you made of the additional measures that farmers would need to take in order for all bodies
of water to meet the 50 milligrams per litre limit?

I am going to add a third part because it is quite relevant to the last question. In Northern Ireland, where they have NVZs they also have a whole territory approach, so that everybody in the whole territory has to obey the rules of an NVZ, even if they are not actually an NVZ. Do you think there is an opportunity for that policy to be implemented in England?

**George Eustice:** I would like to separate those points. On the question about whether we are doing enough and whether we have the right measures in place to deliver the objectives of the Nitrates Directive, the answer is absolutely yes. There is a separate question for me: are there other things we could do that would achieve things that go above and beyond what the Nitrates Directive is capable of achieving?

**The Chairman:** Or would achieve them quicker.

**George Eustice:** Yes. The answer to that is also yes. For me, one of the opportunities we have in leaving the European Union, drafting our own agriculture legislation today—not drafting it today, but debating it today—is to recast the way we think about these things. We can have a slightly more holistic approach and not just reach for the regulatory solution and send someone round with a clipboard and a rule that, “You shalt not have a dung heap closer than 10 metres to a water course”.

Instead, let us have a better approach, where we use a mixture of incentives, capital grants and regulation to get everything moving in the right direction, with a water catchment-based approach to managing some of the challenges. We have a great opportunity to do that. We could do far better. We intend to do far better, and that ambition is absolutely there both in our 25 year Environment Plan and the Agriculture Bill that we will be debating this afternoon.

Some of the approaches we have are whole territory; the new basic rules for water quality—the basic rules for farmers—apply to everyone whether or not they are in an NVZ. We think that is a sensible thing to do, so we already have a mixture of some rules that apply to all and some that are for the NVZs. My basic view is that, while we have the Nitrates Directive and that is what is driving policy in this area, we should designate NVZs in a methodical, clear way that is consistent with what we have done since the 1990s. That is why we have stopped short of taking a whole territory approach because we think it is right that you focus these types of measures on areas where there is a particular problem.

**Lord Rooker:** In your original Explanatory Memorandum back in May, you said the Government do not intend to weaken current environmental protections, and in your letter to us of 3 July you said “at this stage it is not possible to say exactly how nitrates legislation may change”. In their response to the Commons Environmental Audit Committee inquiry into nitrate pollution, the Government said they believe the Nitrates Directive “is cumbersome, over-prescriptive and in need of updating”. By now, I assume you have an idea of the bits you want to change. What would you seek to change if you had the freedom to do it, and is that consistent with
the Chequers proposals for regulatory conformity?

George Eustice: The important point is that changing your environmental regulations does not mean changing for the worse.

Lord Rooker: Sure.

George Eustice: Our ambition is that we want to change for the better. That is how I would square all the things that you presented as maybe being in conflict. We are not going to reduce our environmental protections. We are clear about that.

In the first instance, because we want continuity and a functioning legal base, all the existing provisions, with all their imperfections, will come across to UK law, but if, over time, we could improve the way some of these things work and make changes in a way that is positive for our environment, we would be silly not to. The criticism of the Nitrates Directive, as even the EU would acknowledge, is that it is quite old-fashioned and clunky and tries to have hard-and-fast rules, whereas the Water Framework Directive is slightly more enabling.

The general view is that something like the Water Framework Directive, which is informed, more nuanced and better tailored to a particular area of policy, is probably preferable to the way the Nitrates Directive was conceived. As I said, in the first instance we are not going to get rid of the Nitrates Directive. It will come across, and all the protections with it will carry on, but, over time, I could see us moving to an approach more akin to that in the Water Framework Directive rather than the Nitrates Directive.

The Chairman: We have come to the end of the questions. Helen Wakeham, is there anything you want to add or anything you feel we have not gone through?

Helen Wakeham: I do not think so, thank you.

The Chairman: Jan Dixon, is there anything you would like to add?

Jan Dixon: I have nothing to add, thank you.

The Chairman: Minister—George—Helen and Jan, thank you very much indeed for coming before us. I bring this public session to an end.