HOUSE OF LORDS

Select Committee on the European Union

Energy and Environment Sub-Committee

Corrected oral evidence: Impact of Brexit on the UK's trade in waste

Wednesday 22 November 2017.

10.30 am

Watch the meeting

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

Evidence Session No. 1 Heard in Public Questions 1 - 13

Witnesses

I: Dustin Benton, Policy Director, Green Alliance; Mike Brown, Managing Director, Eunomia; Joshua Burke, Research Fellow, Policy Exchange; Ray Georgeson, Chief Executive, Resource Association; Jacob Hayler, Executive Director, Environmental Services Association; Steve Lee, Chartered Institution of Wastes Management; Lee Marshall, Chief Executive Officer, Local Authority Recycling Advisory Committee; Hilary Stone, Member, UK Environmental Law Association; Unico van Kooten, European Affairs Secretary, Dutch Waste Management Association.

Examination of witnesses

Dustin Benton, Mike Brown, Joshua Burke, Ray Georgeson, Jacob Hayler, Steve Lee, Lee Marshall, Hilary Stone and Unico van Kooten.

Q1 **The Chairman:** Welcome, everybody. This session is on Brexit and trade in waste. I remind Members and our guests that we need to keep it to that narrow subject. It is all about Brexit and trade in waste, which we are looking at as part of a series of inquiries on the impact of Brexit on the environment, agriculture, fisheries and energy.

This is a public session. It is being webcast and a transcript is being taken. I shall ask our witnesses to give a two-minute introduction. I stress the need to keep to two minutes otherwise the session will overrun, and I am very keen that we get into questions and answers with everybody. I ask people briefly to introduce themselves in part of that time, and then to make their pitch from their viewpoint and that of their organisation. Over to you, Mr Hayler—two minutes.

Jacob Hayler: My name is Jacob Hayler. I am the Executive Director at ESA, the trade body that represents the UK's waste and recycling industry. In my two minutes, I will try to give a bit of context about what we do and why, and what the direct impacts of Brexit might be on our trade in waste.

What do we do with the EU? We export a lot of material, both for recycling and for treatment in energy recovery plants. Between 3 million and 4 million tonnes of recycled materials go to the EU. Of that, probably between 2 million and 2.5 million tonnes are scrap metal. It is worth almost £1 billion a year. We also send more than 4 million tonnes of waste as fuel, which is used to generate power in places such as the Netherlands, Germany and bits of Scandinavia. We actually pay them to take that material and treat it on our behalf. Why do we do that? Because we do not have the facilities to deal with the material at home. We do not have sufficient energy recovery plants in the UK to treat that stuff. We do not have the domestic capacity to process and recycle it back into products in the UK.

The impacts of a hard Brexit might mean some tariffs in the case of fuel. Tariffs on metals under the WTO are zero, thankfully, so there is less impact, but there could be non-tariff barriers and administration costs, all adding up to higher costs and more delays. Potentially, there will be less material going abroad and therefore more being landfilled at home.

The Chairman: Excellent. Thank you very much indeed.

Joshua Burke: My name is Joshua Burke and I am a Research Fellow at Policy Exchange. We wrote a report earlier this year, which I have here, called *Going Round in Circles*, which looks at developing a new waste policy postBrexit. I do not want to cover things that Jacob covered but, similarly, we looked at the RDF export market, and opportunities around it, and whether there is a capacity gap looming. Depending on which studies you look at, it could be 13 million or even zero by 2025. We wanted to look at what the opportunities were to make use here of some of the RDF exports that we are paying other countries to use, and whether there is potential to use energy from waste recovery plants here, but only where they are highly efficient, whether that is CHP or not. We really majored on the RDF.

Slightly different from the export side of things, we looked at the Circular Package, highlighting whether it was really appropriate for the UK to adopt it after Brexit. We looked at the various options the EU could have chosen. It actually took the policy option that was the most expensive for the UK, at a cost of £2 billion. We looked at whether that was appropriate and whether there were other potential options that the UK could adopt post Brexit.

The Chairman: Thank you very much indeed. Everybody is being well controlled so far—not putting pressure on Steve Lee.

Steve Lee: My name is Steve Lee. I am an independent consultant, and today I represent the interests of the Chartered Institution of Wastes Management, of which I was Chief Executive until this time last year.

You will hear through the rest of this evidence session that export is very important to the waste and resource sector in the UK. Jacob has already given you some figures. There is reliance on export of materials, particularly plastics, metals and textiles. The UK has a good track record in collecting and reprocessing those materials, but we have only a certain demand for those materials in industry in the UK. We are heavily reliant on export. We are also reliant on the export of part-processed material that is not suitable for recycling as fuel, particularly across the North Sea to other European member states.

You will hear that the impact of Brexit on that trade is far from clear. We have no clear idea about whether we will have access to the Single Market, or whether we will be part of the EEA or the Customs Union. It could open up policy differences between the UK and other EU member states. It could bring border issues, particularly for Ireland and possibly for Gibraltar. There could be tariffs. There could be non-tariff barriers to trade, such as product standards. If the detailed composition of plastics in the UK is different from the EU, because products have changed, it could mean that we have difficulty placing those plastics in a market that is not ready for them.

We are looking for three things for the future, because there is no doubt that there will be pressure on the industry to recycle more, to send less to landfill and to reduce waste in all sorts of ways. There is no point in just pressing the industry to do that without making sure that the markets are there and ready to take the materials that we place in the market. We are looking for the protection and support of business with the EU, policy continuity and simplified trade and controls to protect and develop non-UK markets. For me, that will centre particularly on the quality of what we place back into the market, and stimulating UK demand for what we prepare. We have an opportunity to do that through the UK Industrial Strategy. A resource strategy is something we want to stimulate.

The Chairman: Good; thank you very much. Welcome, Hilary Stone.

Hilary Stone: My name is Hilary Stone. I am an Honorary Research Fellow at Imperial College London. My particular interest is waste, and it has been since the late 1980s when it first became a trade issue.

EU waste law, regulations and policy are embedded in British law. Typically, English transposing regulations—I say English because of course we have a devolved country problem to deal with as well—usually refer to the Directive and contain enforcement provisions; nothing else. Accordingly, almost every piece of waste regulation will require scrutiny and change. Post Brexit, the devolved countries' waste policies and regulations may take different paths, since the environment is, as I have just said, a devolved matter. This will potentially make trade in waste, even within the UK, more difficult.

Waste and resource management have developed over the last 40 years in accordance with EU law and policy, which has provided long-term vision for the sector; for example, in the development of the waste hierarchy and the circular economy. EU policy has provided targets we might not have contemplated; for example, in relation to landfill. EU environmental standards require compliance, without which the sector will find it hard to trade in an international market. When the EU (Withdrawal) Bill passes into law, we shall have created a third body of law frozen at a point in time, unchanging unless we choose to track European law or make our own changes. That might restrict trade in wastes.

One final point: the English courts could be faced with issues of interpretation of established jurisprudence based on EU law up to the date of Brexit. We do not yet know to what extent the English courts will in future be able to refer to EU jurisprudence. Over a period of time, cases that have taken place refer not only to English cases but to European cases and to European directives as well as to English law.

The Chairman: Thank you, Hilary. Welcome, Dustin Benton.

Dustin Benton: I am Dustin Benton, the Policy Director of Green Alliance. We are a think tank and charity focused on clean growth. We run the Circular Economy Task Force, which is a collection of businesses working towards a more circular economy in the UK and abroad. Recently, our research in this area has focused on how the circular economy can address unemployment challenges; how eco-design can make our products more durable, long-lasting and able to be recycled and reused; how novel materials can be designed in ways such that they do not become waste; and how the UK's industrial strategy can increase resource productivity.

There are four things that I would like the Committee to think about in this inquiry. The first two are very waste-focused. The first echoes the points about waste definitions and how we decide on those. That is absolutely essential. We need secondary raw materials and we need them to be traded. Circular economies do not necessarily operate within the borders that politics gives us. Getting those definitions right, which is very geeky but deeply important, makes the difference between being able to trade secondary raw materials across borders and get the economic benefits, or possibly not.

The second question is about the balance between RDF exports and domestic energy from waste. There will be a big tension, I suspect, in this discussion between "Let's build a bunch of incineration equipment in the UK" and "Let's rely on stuff that other people have already built". The big question is, are we getting the maximum value from those resources, no matter where they are sent?

The two further points are slightly wider but bear on the issue. One is to do with product design. As the EU intervenes to change product design to make things more resource efficient, will the UK follow? Will it attempt to lead or will it stay in line? How will that affect the generation of waste, which will affect how much we need to trade?

The final point is about the investment that the UK puts into recycling infrastructure. In a sense, if we have factories that are able to recycle effectively, we will not need to waste so much and we will not need to export so much waste. There will be incentives to separate better and to create better things for recycling here.

The Chairman: Thank you. I move now to Lee Marshall.

Lee Marshall: My name is Lee Marshall. I am CEO of LARAC, which is the Local Authority Recycling Advisory Committee. We are a membership organisation for local authorities across the UK. About 70% of local authorities are members, and we have members in Scotland, Northern Ireland and Wales as well as in England.

In exiting the EU, there are probably two main areas for local authorities. You have already heard about one, which is to do with markets. Although local authorities generally do not deal directly with organisations in other countries for their materials, intermediaries such as members of Jacob's organisation and the Resource Association do. Any changes in the market conditions that they are subject to, and any changes in prices, will potentially come back to local authorities. Given the period of funding reduction that local authorities have gone into, they are much more susceptible to changes in market prices and market availability.

The second area is to do with the policy side. Although it is UK policy, it relates mainly to England, as you have already heard, where it is a devolved matter. With the exiting of the EU, it feels as though there is a policy freeze. We do not know what the future policy for UK waste will be. That has an impact on local authorities' ability to plan their services accordingly, and on the funding that may be available for that. Part of that relates to the Circular Economy Package that is being discussed and whether it will be adopted in things such as Extended Producer Responsibility.

The Chairman: Thank you, Lee. We move to Mike Brown.

Mike Brown: I am Mike Brown, Managing Director of Eunomia, a company that is pretty much the largest UK waste consultancy. I own it with my two partners. We are based in Bristol and London, and we have offices in New York, Brussels and Copenhagen.

A third of our business is in Europe, so we have a direct interest in Brexit. Our biggest client is in fact the European Commission, where we do lots of policy-related work; for example, we have been one of the lead advisers on the development of the Circular Economy Package for the Commission over the last five years. We host the European waste model, which is used for future policy development. We are currently writing a plastics strategy for Europe on plastics in the ocean. Those are the kinds of things we do at policy level.

The second third of the work we do is for local authorities in the UK. We have worked for the majority of local authorities in the UK, generally helping them, through change management, to roll out new recycling services and procure services for the treatment of residual waste as well as for recycling.

Personally, I have been in the waste sector for 30 years; 20 years as an operator, but only 10 years as a consultant and I still do not quite feel like one. Consequently, I tend to do any of the work in our business that is related to industry and business, which is why I am here today. The key messages I want to get across are these. First, it is worth remembering that we are talking about the export of two types of waste. There are recyclates, such as plastic, paper, card and metal, which tend to have some value; and residual waste, which has been mentioned by others, and which UK waste producers, effectively, pay others to treat for them. Those two types of waste need to be borne in mind, and we should not cross them over.

Of all the areas of trade the UK is involved in, I suspect waste will be one of the least affected by the impact of Brexit—the key question we are here to talk about. The export of waste is underpinned by other conventions such as Basel, the OECD, et cetera. Most European legislation is premised on that, so, if the worst happens, we will still have framework legislation that can work to allow export to continue. I do not see it being heavily affected unless we were to impose self-imposed barriers, which we could do, although I find it hard to imagine why we would. I think we are a bit confused as well. We are concerned about the idea that China will not continue to take all our recyclate material—we will talk about that later—yet some people are concerned that we are exporting residual waste to Holland for treatment. It is all part of a market, and we are in a global market.

If we want to move forward towards a circular economy where we recycle more and dispose of less waste, if you put it all together, we should be investing in more recycling infrastructure in the UK. By recycling infrastructure, I mean right the way through—collection, deposit refund schemes, getting better quality materials and reprocessing. That will result in less residual waste. Export to places such as Holland may be only a temporary thing.

The Chairman: Thank you. Welcome, Unico van Kooten.

Unico van Kooten: Thank you. I have come straight from Brussels, and I have a present with me for the British people. It is important to tell you this before it is too late: British people, we truly love you. That is true. It is not fake news. It is important to state this now.

Fourteen years ago, I bought this Delft blue tile near the Royal Palace of my King, Willem-Alexander, in The Hague. It is a representation of the famous "Night Watch", which is a national symbol in the Netherlands and was completed in 1642 at the peak of the Dutch golden age. On the left-hand side, you see a woman carrying a dead chicken. The dead chicken represents a defeated adversary. I will come back to the dead chicken later. Lord Teverson, can I ask you to deliver this present to the British people?

The Chairman: I will. I do not know quite how we are going to do it, but perhaps you will pass it along. We thank you for that. We must not get too much into the House of Orange, but thank you very much indeed. Would you like to continue?

Unico van Kooten: Love comes with responsibilities to make it eternal. Prime Minister Theresa May is, at this moment in time, on a mission impossible to exit from the European Customs Union and to exit from the Single Market, yet at the same time she is determined to keep the main benefits that the European Union has to offer. Every Dutchman knows that this will not fly. The British people themselves have understandable language about that kind of behaviour: double Dutch; going Dutch; Dutch gold; Dutch sandwich; Dutch treat; and Dutch generosity. My favourite at the moment is Dutch agreement. It is about two people making a deal while utterly drunk and not remembering a thing thereafter.

I characterise her mission as "Westmonster's Wonderland". Could the British people please tell me if there is any football club, tennis club or golf club out there in the UK where I can become a member, and not pay a fee and not take responsibilities yet still profit from the main benefits the membership has to offer? That would be a gift from paradise to the Dutch soul. We would immediately set sail to the UK again, and invade your country for the second time. May we start a second Glorious Revolution and make love for peace and prosperity as William and Mary did a long time ago.

The Chairman: Unico, I must call a halt, because we have to move on. [expressions of disappointment from Members/ other witnesses] Ok, I am just the servant of the Committee. If you could just say a couple of words of introduction about the subject, it would be really useful.

Unico van Kooten: Yes. You are absolutely right. As we speak, the Dutch Parliament has asked the Dutch Government to make contingency plans. The Bank of England has asked European banks and insurance companies to start contingency plans. Dutch ports, harbours, transport sector, banks, insurers and producers are all working on contingency plans as we speak. That does not sound as if a frictionless trade agreement is going to come any time soon. I really hope that today we can kill the chicken that I call "Westmonster's Wonderland".

Concerning waste, I fully support what has been said by the other stakeholders at the table. Both sides benefit from this trade. It helps the environment. It helps the economy. But I have to make a general statement because time is running out. At the moment, we are truly talking about "Mayday, mayday, mayday". I do not want anybody to suffer from Brexit. I want us to prosper together. I leave you with that.

The Chairman: Thank you very much indeed. We will not be discussing those broader issues during the meeting if I can help it, but I am sure we would love to have a long conversation afterwards. Finally, over to you Ray Georgeson.

Ray Georgeson: Thank you for the task of following Unico. He forgot to mention Dutch courage. I promise you that the glass I am holding is not gin; it is just water. Cheers to you, Unico, and a very good morning. My name is Ray Georgeson and I am the Chief Executive of the Resource Association.

We appreciate the interest and the spotlight that the Committee is placing on our industries. It often seems that we are only in the spotlight when there are issues and challenges for our industries. For me, that is a shame, because we are the unsung heroes of British industry, collecting, recycling and reprocessing into products, recovering energy and safely disposing of the nation's wastes and resources 24 hours a day, seven days a week. My own part of the sector is primarily the reprocessors—companies that make goods from recycled materials. Their supply chain deals with approximately 7 million tonnes a year of UK materials. We employ 12,500 people directly, and we contribute £3.3 billion to UK GDP.

There are concerns about Brexit, and they mirror those that have been signalled by other, larger voices in industry, such as the CBI and the EEF. They concentrate on concern about the protracted nature of the negotiations and the uncertainty that that generates in industry about future investment. There are serious concerns about the loss of benefits related to the Single Market and the Customs Union. There are some concerns about the danger of economic downturn. We will potentially be buying fewer finished goods and products, whether they be cars or cardboard boxes. That clearly has an impact. We are also concerned about labour mobility, particularly the degree of dependency in parts of our industry on non-UK EU nationals for the sorting, collecting and processing of materials across the whole of our sector.

What we need is clarity, ambition and a long-term policy direction from our Government. Brexit is the wrong trigger for that. It is needed regardless of what happens with Brexit. With the right mix of regulation, enforcement, incentives, fiscal measures, green procurement, proper links to the emerging industrial strategy and manufacturing demand re-energised in the UK, we could see some good clear investment and clear signals that would drive that investment forward into a more resource-productive circular economy. It is an open question as to whether or not Brexit assists us in that, given the drain on other parts of public policy with the absorption of the brain power and energy of the Government into the negotiations and their aftermath. That takes away from the need for UK policy developments.

Q2 **The Chairman:** Thank you very much, everybody, for that introduction. The way the meeting will go from now on is that our Members will put various questions, and I ask those who want to make a contribution to indicate that. I remind everybody that you do not need to contribute to every question, otherwise it will be quite a heavy meeting. Please, if you have something really important to say, say it, but keep it brief and to the point, and that will make it work. I remind Members to declare any interests that they have when they speak.

I will start with a very basic question, which has been covered to some degree. What is the key factor in the future relationship? I will assume for the moment—although, as we have been reminded, we do not have to—that we are probably not going to be in the Single Market or the Customs Union, because that is the Government's current policy. Is that going to get in the way of trade, as it is at the minute, or not? We had a distinction between the trade of waste for energy and recyclate. We have also had another category—hazardous waste, which is even more difficult. If anybody has anything to say particularly on that, where the OECD conventions, and some current EU laws, are even stronger, I would also be interested.

Is waste going to be the least-affected area, as was suggested, or are there real dangers? Does anybody want to come in on that just to emphasise those points? I will then open it out to the Committee.

Unico van Kooten: Before coming here, I made an assessment of the trade barriers, especially tariffs. World Trade Organization tariffs will be in place, which mean that additional costs of 6.5% will have to be borne. Comparing that with countries outside the EU that do not have that 6.5%, and even go to 0%, I am a bit worried about it.

We have to understand that the United Kingdom has gone a long way to depart from large-scale landfilling. You did a very good job of making good use of the resources in waste, but, if we get into the cliff-edge scenario, about 3.5 million tonnes of waste will most probably have to be landfilled again in the UK. That will cost you an additional 5 million tonnes of CO_2. Traders could use the opportunity to go for outlets outside the European area, where there are trade tariffs of 0%, but that is not always good for the environment, especially when there is not sufficient infrastructure in those countries for treatment.

The Chairman: Do you think there might be a diversion of trade?

Unico van Kooten: Yes.

The Chairman: I want briefly to ask you about non-tariff barriers. How do you see those? Are they more of a problem?

Unico van Kooten: I think they are less of a problem, because the OECD rulings are in place. All the administrative issues are in place.

Steve Lee: There is a specific type of non-tariff barrier that we have to bear in mind. As product policy in the UK and EU member states starts to diverge, it is quite possible that EU standards for polypropylene in consumer goods or in vehicles will be different from those in the UK—for example, different flame retardants—and that might mean that UK polypropylene would no longer be welcome in EU markets.

Dustin brought up the importance of product policy in the future. It is not something that I would expect to bite particularly deeply on day one, but I expect product policy to be divergent. That will be increasingly important.

Jacob Hayler: We need to keep differentiating between recycling and waste as a fuel. On recycling, I was going to say exactly what Steve said: product policy divergence could have a future impact. In the nearer term, we are unlikely to see too much disruption in some of the recycling trade, which I think some of the other panellists would agree with.

More of an issue for us are changes to the strategic direction of policy, as well as to some of the technical regulations. Some of the non-tariff barrier type stuff could increase costs for fuel—the other side—which will also open up more opportunities for waste crime. That is a really big issue. We think that about 2 million tonnes of household and commercial waste get dumped every year in the UK. The more cost and the more difficulty there is in finding legitimate outlets, the more opportunities there are to go down an illegal route. That is a real concern for us. At the margin, we will simply landfill more material than we otherwise would have done over the next 10 or 15 years.

Dustin Benton: On the non-tariff point, the definition of what counts as waste, and when it stops becoming waste and starts becoming a secondary raw material, is really critical. We did some work with the Dutch Government and the UK Government on something called the North Sea Resources Roundabout, which was an attempt to harmonise different regulators' views about when something stopped being waste, in order to be able to promote the reuse and recycling of materials. That took place in the context of both countries being member states of the EU, with a common and shared regulatory framework. If we decide to stay out of that regulatory framework and to diverge, those sorts of opportunities to increase trade on the basis of mutual standards could be undermined.

Ray Georgeson: I chaired a number of meetings of the North Sea Resources Roundabout, partly for the Dutch Government and for the Green Alliance. I echo what Dustin has just said. Picking up a point that Jacob made in his opening presentation—Steve touched on it in relation to non-tariff barriers—the potential for sluggishness in the continuing trade in waste is quite strong, in territory where, frankly, the profit margin is pretty tight on per-tonne movement of waste from one country to another. Anything that gets in the way, such as the new bureaucracy that will emerge outside the Customs Union, could certainly have a sluggish effect on trade, but, as other colleagues have said, we are projecting something where nobody is really sure yet about the outcomes. It would be reasonable to assume that there will be sluggishness if margins are made even tighter than they are already.

Mike Brown: I have two additional points, rather nicking other people's, I think. First, the idea of not being in the Customs Union makes me wonder what border controls will be like and whether waste will be held up at ports. There are certain types of waste, especially waste used as fuel, which will have material in them that can cause odour and various other things. Storing it for longer periods of time could be an issue. If you get stuck behind sheep, or whatever, and it takes time to get through borders, that could be an issue.

Secondly, we have not talked about the non-tariff impact of Brexit on the value of sterling. In equal measure that has made the export of recyclate more profitable, because there is a revenue associated with it in other currencies, and the export of any waste as fuel less profitable, because there is a cost associated with that.

Finally, on price sensitivity, to link back to the impacts of a tariff, if there were to be a tariff, as a most favoured nation you would imagine that it would not be any worse than 6.5%, not forgetting that some materials already being exported have that tariff applied to them. Quite a lot of materials we export to China, for example, have it, so it is not new for some materials.

On waste as fuel, the addition of that tariff is pretty marginal in the commercial context. Price sensitivity on waste as fuel is far less. Our near neighbours have far more flexibility in the pricing they can offer than there is on the recyclate side. A small increase in the value of recyclates due to the drop in the pound is good for the sector. A small increase in the cost of getting our residual waste into energy facilities on the continent is a very small impact; it is a lot less than the other price fluctuations we have seen in recent years[1].

[1] The Witness subsequently wished to clarify this statement as follows; "Compared to the impact that a 6.5% tariff has on the price of recyclate, the impact of such a tariff on the price of waste as a fuel is less. Despite this, any tariff imposed on waste to be used as a

The Chairman: Unico, if you want to come back it has to be very quick.

Unico van Kooten: I have here a paper from Professor Joseph Fiksel of Ohio State University, where he shows that the raw material interdependence of the UK is prosperous. As you know, waste is the end of the production and consumption phase. We want to move to a circular economy, so we need scale. At the moment, the Dutch and the UK are working very closely together in the North Sea Resources Roundabout, sharing knowledge, information and experience. At the moment, we have very sophisticated supply lines. Just looking at that picture, you can imagine that making all kinds of new trade agreements within one and a half years to make sure that your prosperity stays at the same level may be mission impossible.

The Chairman: Thank you, Unico. Perhaps you could give us a copy of that paper.

Steve Lee: You are quite right to say that hazardous waste import and export is covered by the Basel Convention, which is global and not strictly European. Other EU member states have special relationships with the UK on hazardous waste import for disposal. It is a very complex area, and I would advise you to take advice from the Environment Agency, if you have time, outside this discussion. Ireland, Greece and Portugal all have special relationships with the UK. I understand that there are transitional arrangements with Poland, Slovakia and Bulgaria. Please take advice from the Environment Agency.

The Chairman: That is on hazardous waste. Do you know what sort of materials?

Steve Lee: It is usually a small quantity and almost always for wastes for which it is not practicable to have a solution within the other member state.

Lord Young of Norwood Green: Does that include electronics?

Steve Lee: Probably not, no. It is more likely chemical wastes.

Hilary Stone and clinical waste.

Q3 **Viscount Hanworth:** Steve Lee indicated that we export large quantities of plastic waste and that we may have problems with its composition. The export of plastic waste seems to suggest that we do not have facilities ourselves for dealing with it. How easily can we improve our treatment of this waste? I would like to know how many varieties of plastics there are, how easily separable they are and whether they can be readily recombined in a recycled product. Essentially, is there a possibility for improving treatment of our plastic waste?

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fuel would only serve to increase prices. As this waste would otherwise be sent to landfill in the UK, there is a net environmental benefit to exporting it, and therefore a 0% tariff would provide the best environmental outcome”

Steve Lee: The easy answer is: yes, of course it is possible for us to improve our separation of plastics.

Viscount Hanworth: But at what cost?

Steve Lee: There is a mindblowing number of different types and mixes of polymer, and polymers with additives and without additives. It is incredibly complex. We want plastics to be simple, but they are not. The good news is that most of the plastics that we touch as consumers, whether cars or packaging, tend to be of a much smaller number of polymers. We have to get the quality of output from our industry right for the markets we are serving, whether they be international, domestic or the rest of Europe. There are people around the table who have much greater expertise about the separation and quality of plastic polymers, so, as I am actually sitting next to one, I will pass the ball to Ray Georgeson.

Ray Georgeson: That was a hospital pass. In a nutshell, the headache with all plastics lies at the product design stage. The more we can do to rethink the way we design for recyclability, in the separation of polymers and avoiding certain combinations and composites of polymers, the easier it will be to have efficient sorting and then reprocessing of those polymers either back into products, or even through energy recovery if that was the solution.

Part of the headache that you are describing is the likely ban of certain materials to the Chinese market. I am sure everybody is aware of that and I suspect we will talk a bit more about it. The last time I checked I think 55% of the UK export of plastics was being taken by the Chinese market. The next largest market is Malaysia, which is six times smaller than the Chinese market. There is a serious issue coming as regards what happens to that material. In the relative short term, there may be some stockpiling. It may well be that much of it is diverted for energy recovery, for heat and electricity. That will be a short-term, but not an optimal, solution to that particular headache.

The key always is in the design. Once you start to go back through the system and talk to manufacturers and designers, you realise that government and all of us have a big job to do. There has been resistance. There is nervousness about excessive regulation in this territory. We try all the time to encourage the design community to think beyond the immediate first life of a product. That is not an easy task, and I cannot pretend that we have an easy solution.

Viscount Hanworth: It is not only European Union nations doing the job for us; it is mainly the Chinese.

Ray Georgeson: Other European Union nations are not particularly doing the job for us with plastics recycling. Some UK-derived plastic recyclate goes into other EU markets. Most of it goes to China.

Dustin Benton: There are three points of intervention in the plastics market. There is the design phase. That is where the EU's eco-design programme is looking, and where I would say the UK ought to think about whether or not it wants to stay in sync.

There are some things where we do not have to reduce complexity; for example, plastic bottles. We have done some analysis, which I will share with the Committee later, about what plastic gets into the oceans. That is obviously a key ecological challenge. The big lot is beverage litter—basically plastic bottles. That is a pretty homogeneous stream. There are some design issues but they are not supercomplicated. The question is how we collect them. We know that well-designed collection schemes, such as deposit return schemes, get 95% of bottles back. They go straight into recycling. It is a pure stream and it is very cheap and easy to recycle. We can do that in the UK if we build the infrastructure.

Unico van Kooten: I assume that the import ban in China is in itself an opportunity for the UK to invest more in building recycling facilities inside the UK. At the same time, producers, such as Philips, will take the raw material, the granulates. They ask us to scale up, to become bigger and better on quality. They want to make long-term contracts and have stability of raw material supply. You need a market that is strong and big enough.

Jacob Hayler: On plastics, it is absolutely to do with design and encouraging the use of recycled material to create a demand for those materials here in the UK. We would like the packaging industry to take more responsibility for that. The [packaging] industry says that there is a trade-off between performance and recyclability, for example, but we would like to see incentives in the right place, so that where there is environmental damage and where things are not easily recyclable it should be paid for.

The packaging industry in the UK pays about £15 per tonne in compliance costs under the packaging regulations. The same guys in Austria and Germany pay more like £115 per tonne. There is quite a big difference, and it shows what could be achieved and what additional funds could be put into the system from alternative sources, given the fiscal situation in which local authorities find themselves.

Mike Brown: I completely agree with everything that has been said, and with Dustin and Jacob in particular. The key is to get our producer responsibility legislation and regulations right, so that the polluter is paying the right amount of money. That will then provide the investment we need, whether that is investment immediately for our own reprocessing facilities, or whether it just gradually increases the quality of our recyclate.

China may be about to pull down the shutters. We will see whether the WTO gets a five-year extension, but I doubt it. We may feel confident that we can go to India, Indonesia or somewhere, but the direction of travel is clear. It is all about quality. It is all about reprocessing. Sooner or later, we will need to collect more from the producer and the consumer. There is an opportunity without Brexit, but also with it, to look seriously at our producer responsibility rules.

This next point is slightly left-field but I will raise it. I am not arguing for a hard border at all, but, if we were to find ourselves with a very hard customs border, the possibility of new taxes becomes easier. The idea of taxing plastics, for example, is something that the Government could consider if they wanted to do it. They could include a tax on the import of plastics as well. I throw that in, because we are trying to understand the opportunities as well as the problems of Brexit. If I really think hard, they are the kind of things I find at the bottom of the barrel.

Q4 **The Duke of Montrose:** I am from a rural and farming background in Scotland. Part of our experience of recycling was not a happy one. I am in the area where there was something called Rechem, which perhaps a few of you will remember.

If such a large proportion of waste is going for heat production in Europe, presumably it is either uneconomic to do it in this country or less economic than just sending it to Europe. Is using waste for heat in this country something we want to do more of? What should we encourage the Government to do to follow that path?

Joshua Burke: We absolutely want to use more here, if we can do it, for CHP—combined heat and power. Part of the problem is that at the moment it is beneficial to send it to the Netherlands, for example, because it has more energy-efficient processes to capture both heat and power, whereas here it is very difficult to develop a power station. For my sins, I was a CHP developer previously, and it is very difficult to find someone to take heat from your power plant. If you want to develop it and do combined heat and power, it is extremely difficult to do both. It becomes less efficient to do it here.

For example, if you try to contract with a body or a company that will take heat from you, you have very little confidence that their balance sheet or covenant is strong enough and that they will stay solvent for long enough to take that heat from you. You have no confidence necessarily that the heat offtake will be there in perpetuity. It makes it very difficult to develop projects when you do not know who is going to take heat from you and for how long.

We absolutely should be doing it. Part of the problem is that we do not have an integrated approach for the heat offtake, particularly with district heating systems. If we developed a CHP power station that had an integrated district heat network, the heat offtake would be sorted, but there is a kind of disconnect between power stations and district heating, and who is going to take the heat. We need to look at a coherent policy that links the two. We want to do it, but there are a lot of challenges.

The Chairman: Of course, on the continent they are a lot better at district heating than we are here. A lot of the systems are integrated.

Joshua Burke: Yes.

Hilary Stone: In addition to using waste for power and heat, there are real opportunities to use waste for transport fuel. There is a lot of work going on in that area at the moment. It is a real possibility in the future that substantial quantities of transport fuel will be generated from waste.

The Chairman: Transport fuel is one area yet to be sorted out in decarbonisation or whatever.

Hilary Stone: This is true.

Jacob Hayler: I agree that the use of waste as a transport fuel is something for the future, but in the interim, as alluded to in the question, we need to see how we can raise the efficiency of our energy recovery plants. As Joshua said very well, there are two opportunities: industrial offtakers and district heating. Joshua explained some of the issues around industrial offtakers. With district heating, retrofitting is expensive and risky. What we really need is some sort of government/public sector intervention to de-risk some of that. I do not know whether you could have the installation of district heating as a regulated utility or something like that. A lot of interesting thinking is going on in that area, looking at how we can deliver in the UK things people already have overseas.

Dustin Benton: We should be cautious about what the use of waste for heat and electricity looks like for the UK's decarbonisation trajectory. Energy from waste plants typically produces more than 300 grams of CO_2 per kilowatt hour for electricity. Even if it includes a hefty chunk of the energy going into that as biomass, which is deemed to be zero so we will take that out, the UK's power sector had 270 grams of CO_2 per kilowatt hour this year. That is because we are cutting out coal and building lots of offshore wind.

I do not think it would make much long-term sense to add a higher carbon intensity generation plant to the UK's energy mix when we have decarbonised much more rapidly than we thought we would, especially when the assets we are going to build, particularly if they are new assets, will last for 20 years. Even now, it does not look like a good bet in current terms.

The Chairman: Threatening another stranded asset? Ok. Before I bring in Unico, Lee Marshall, from a local authority point of view, is there anything so far?

Lee Marshall: Not so far.

Unico van Kooten: Every municipality in the UK should make its own assessment as to whether it is beneficial to establish an energy-from-waste facility. At the moment, building an energy-from-waste facility in the UK depends on the location, but the costs are lower than exporting the waste. You have to transform mixed municipal waste into RDF and transport it overseas. Transformation into RDF and the transport come with jobs for the UK, so there are trade-offs, and that is very important.

In the Netherlands, we are working on the next phase of being carbon-neutral. That means that our facilities are looking into the utilisation of carbon, together with the chemical industry. Part of the remaining plastic fraction is incinerated in waste-to-energy plants. If we can take out the CO_2 and reutilise it—for instance, in greenhouses—or make an energy source from it, we can then, in combination with high-quality recycling for plastic granulates, make a full cycle for plastics. That is also in the interests of the chemical industry. We are moving onwards to even more CO_2 neutrality.

I compliment the UK. A lot of energy-from-waste plants have already been built. You have also built a lot of RDF facilities and sorting plants. A complete infrastructure has been built, and it is something to be very proud of. I am quite sure that it will develop further.

The Chairman: It is good to praise ourselves occasionally. We tend to look on the other side perhaps too often in this Committee.

Steve Lee: With 3 million to 4 million tonnes of fuel being exported across the North Sea, we are talking about exporting energy from the UK. It could be exploited in various forms, and it is energy that we would do well to make use of here in the UK.

The market takes advantage of the fact that some other North European member states overinvested in their energy-from-waste capacity. Moving towards more waste prevention or recycling means that spare capacity has been available at some of their plants, and that capacity has been available to customers such as the UK at a good price. That price was robust even in the face of the devaluation of the pound in the last 12 months.

You are absolutely right that it is a relatively high-intensity carbon form of energy, but there are other ways we could process it. That was brought out for us very clearly in the Clean Growth Plan and the National Infrastructure Assessment. It is a form of energy whose use we would do well to maximise in the UK. I do not see it as a Brexit issue at all. I see it as an industrial strategy and a decarbonisation issue.

Jacob Hayler: To go back to Dustin's point about carbon performance and the plants, the baseline or benchmark for comparison is landfill. The waste sector has reduced its emissions by 70% or 80% since 1990, and that has been driven by landfill diversion. Yes, we need to decarbonise, but the performance of those plants is an important element of that as we switch away from landfill and think about other technologies further in the future.

As regards stranded assets, private sector investors are putting their money into those plants. If they want to take the risk, that is up to them.

Joshua Burke: There is a wider point about resource productivity and eking out more from the material we have. I take Dustin's point that it is carbon-intensive, but, if we make it CHP and not power only, that mitigates it. There are advantages in pyrolysis and gasification technologies as well. We should do more on resource productivity.

Mike Brown: The sector has to decide, generally speaking, whether energy-from-waste facilities are power stations or waste facilities. The nearly all electricity-only fleet that the UK has, because of the low efficiencies, should not be called power stations. If we call them power stations, and the reason we are burning waste is to get energy out of them, it is an incredibly inefficient way of doing it. They are primarily waste facilities and that is why we are here. We are talking about waste. These are facilities that get rid of waste in a better way than landfill. Jacob is absolutely right to compare energy-from-waste facilities to landfill. That is the key argument.

Let us remember that you cannot both recycle and burn waste; you have to choose. Your starting point has to be your aspirations for recycling. We are really confused about that, especially in England, because we have a policy vacuum. Europe is about to introduce a Circular Economy Package, with recycling rates and very stringent contamination requirements, as well as 65% by 2030. Wales is already at the high 50s. I allow for the fact that they count in bottom ash from incinerators, and I would not want to do that. They are still at the high 50s. Scotland is heading that way as well, and they have aspirations to get to 70% or 80%. All we know about England is that we think we are still aiming for 50% by 2020, and beyond that we know nothing.

We have an environment plan that is two or three months away, in theory. It is a 25-year Defra environment plan. I think it has been three months away for 18 months, since, to be fair, it was effectively abandoned or postponed because of the Brexit vote. That is just an environment plan. Waste will be just one small chapter. What we need is a waste plan, and I suspect a lot of people will agree with me. In England in particular, we are, frankly, slightly humiliated by what Wales and Scotland are doing in their aspirations for recycling. In England, we have a complete policy vacuum. We have to decide how much we want to recycle before we know how much infrastructure we need to burn waste, because the waste facilities—

The Chairman: The Committee publicly shares your frustration, to a certain degree, in this area.

Q5 **Lord Rooker:** This fits exactly with the issue I want to raise. In principle, I am in favour of devolution and local decision-making. I want to ask about the effect on the UK economy of 400 collection systems for waste; the inability to have large-scale enterprise; and our dependence on the vagaries of odd local government decisions. I am not criticising the councils, but what is the damage to us in not being able to organise? Surely we need a nationalised system. This follows exactly from what you said; it is the Achilles heel.

I read last week that it has got so bad that people are talking about opening old landfill sites to fill them up. I cannot think of anything worse.

It looks as though we need a major restructure of local government and the position of devolution if we are to get a decent solution to this on behalf of the UK economy. Is that right?

The Chairman: Lord Rooker, we are looking at Brexit and the trade in waste.

Lord Rooker: That was all related to Brexit.

The Chairman: I do not want to go too much into local authority organisation, but if we could answer the question in relation to a Brexit issue in any way that would be useful.

Unico van Kooten: Lord Rooker, the answer is the Circular Economy Package. At the moment, it is being drafted in Europe, together with the UK, and I am very happy about it. It is about a new way of doing business. We produce waste, and we try to do our best with it and put it on the market. In the future, we will have to rethink our strategy and look at what producers actually want and what intake they would like. For that, you need a strategy for production that is linked to the raw materials. That requires national thinking, and international thinking. I am with you there, Lord Rooker.

The Chairman: Lee Marshall, from the local authority point of view, Lord Rooker raises a particularly important point about devolution and how this all fits in.

Lord Rooker: This is directly related to Brexit, by the way. It is not a general issue. Brexit has brought this about. We could be in a position where we are damaged and we cannot export what we want and get big enough contracts because of the way we do things with waste, simply because of the way we are structured. I am asking that because it is a Brexit-related issue. I do not agree with the Chairman's view that I was raising a general issue.

Lee Marshall: I will try to keep it related to exiting the EU. On the policy side, I think the last national waste policy for England was in 2011. That has been a long while coming, and exiting the EU has put a hold on any update of that. Equally, as has just been alluded to, it has put a hold on the potential adoption, or not, of the Circular Economy Package, which, if we were carrying on in the EU, would have been adopted at UK level and would have fed down to national targets, as it has already in Scotland and Wales.

Local authorities operate under the legislation and the policy that is in place, as do all businesses. What is currently in place for England is 50% recycling. There are, we believe, no consequences of failure of a local authority to meet that 50% target, through punitive fines or what-have-you. Within their budget constraints, local authorities have local determination over how they progress with their services.

There are not 400 collection systems across the UK. Broadly, waste is collected in three ways: kerbside separated, co-mingled, or a mixture of the two. They each lend themselves to a particular container, generally speaking. Virtually every local authority in the UK can collect plastic bottles, cans, paper and card at the kerbside. The point was made earlier that we need a well-designed collection system for plastic bottles, but it is there. Only two local authorities in the UK do not collect plastic bottles from the kerbside. The issue is getting people to use the system and the impact of on the go—what we do with bottles that do not end up back in the home.

To go back to the exit from the EU, that is potentially where firmer producer responsibility for the UK could come in. Jacob mentioned the costs of producer compliance in the UK. The companies involved with producer packaging responsibility in the UK will tell you that they have the lowest cost system in Europe. They do, and it meets the targets, but it is the lowest cost to the producers. There is a system—the PRN system—that in theory provides a fund for increasing recycling. It is worth approximately £60 million a year. Our rough calculations are that UK local authorities spend about £800 million on collecting packaging alone. It may be the lowest cost to the UK producers, but it may not be the lowest cost system in Europe for UK plc.

Joshua Burke: I want to pick up on the PRNs. It goes back to the point Justin made earlier about looking at the market for secondary material. Something we were quite keen to highlight in the report is the real need to reform the PRN system, particularly in the export of waste, where we are at a competitive disadvantage with the EU because of the methodology that the PERN system uses. At UK level, we do not discount for the amount of waste that we bring in, whereas the EU does, so we are at a competitive disadvantage there. That is something we should certainly look at.

Ray Georgeson: I have the briefest of responses to Lord Rooker, because I know you want to move on, Lord Chairman. I share the frustration that he expresses. Defra is a hollow shell in comparison with the department in which he was a Minister a few years ago. There are very small numbers of officers working on waste policy, certainly compared with 10 and 15 years ago. There is no question but that that affects quality and our ability to make good policy, good law and good strategy.

Defra is about to start what it describes as a refresh of resources in waste strategy, and we will all do our bit to contribute. There will be a lot of onus on industry bodies around the table to put in resources to assist the Government with that because the bodies are simply not there in the Government to do the work or the thinking. Those who are there are completely preoccupied with bigger questions around Brexit than the questions we are tackling in the waste and resources sector. That really is the nub of it. Frankly, the detail about collection systems or the frustrations of devolution and so forth could all be worked out in a serious strategic attempt to devise a new policy. Let us hope that we see it.

Jacob Hayler: I have three quick points. First, on local authority different systems, I agree. We think that local authorities have made a lot of very good savings and have driven a lot of efficiency savings in their waste services. We think there is scope to do more through joint working. That is definitely an area where we would agree.

Secondly, opening old landfills is a direct result of the policy vacuum. We are not investing in alternatives, which means that we are becoming more reliant on landfill than we otherwise would be, which I do not think anybody wants.

Thirdly, on recycling levels, the Welsh recycling rate is 54%, based on the EU definition. When I last checked, Wales pays about 20% more per head in waste management costs. When we are thinking about how high we want to drive our recycling rates, there are two key things we need to factor in. First, how are we going to pay to put in the extra services? Secondly, and crucially, where will it all go? How can we help the demand, and encourage people to use recycled materials so that it is pulled through the system?

Unico van Kooten: There is a lot of diversity at local level in the Netherlands. As I was saying, private companies are scaling up in the recycling market. Recently, an English company and a Dutch company merged: Shanks and Van Gansewinkel. There has to be scaling up to get to the next level, which is the circular economy. The recycling companies have to be on speaking terms with the producing industry. That is the next level.

It is very important to look at efficiency at local level to see where it is right or wrong, to put in additional knowledge and to have a strategy. At the moment, we are working on the circular economy and in the North Sea Resource Roundabout. I would really like us to stay closely together in that. The UK, the Netherlands, Flanders and even France are in there. This is absolutely the way forward to make our economies more resilient and to take into account the scarcity of raw materials. The world population is growing and there will be more tension in getting raw materials to our countries.

The Chairman: I have to move on. We need to keep the responses fairly short, as a number of my colleagues want to intervene.

Q6 **Lord Young of Norwood Green:** I am a Remainer, but as I listen to the dialogue it seems that, if nothing else, Brexit will, as someone once said, concentrate the mind wonderfully and force us to improve our performance in some ways.

I want to go back to design. Somebody mentioned the phrase "producer responsibility legislation". It seems to me that that is a starting point. I am still unpacking things with that godforsaken plastic that breaks up into little beads. I have forgotten what it is called—I hoped somebody might be able to help me. God knows what it is. Polystyrene. Once it breaks up, it is all over the place. You see it dumped at roadsides and I still find it in packages. I cannot believe that we could not find an alternative.

I want to get back to the question of producer responsibility legislation. I think Ray said "We don't want too much regulation", and then somebody gave us some figures on costs. Is part of the answer saying to companies that, in producing packaging or products, or whatever it is, they have a responsibility to look not only at their inherent first use but at what will happen to them, and there ought to be penalties if they fail to meet those criteria?

The Chairman: If we can look at this from the angle that there are opportunities post-Brexit to do things that we cannot do now, it would be interesting.

Ray Georgeson: I should put on record that I am a big fan of regulation. The comment I was making was that the mood is very little appetite for too much regulation. In the past, we had the Better Regulation unit and two in, three out, or whatever it is now; I have lost count. The mood is not generally in favour of even the sort of intelligent regulation that we could usefully have in this sector.

I know we are trying to draw the discussion back, properly, to the question of the Brexit impact. The Circular Economy Package coming through from the Commission, from Brussels, has some requirements on Extended Producer Responsibility, but it leaves the onus on the member state to work out the detail of what is appropriate for that member state.

There is a good debate going on in the UK about what Extended Producer Responsibility should look like. There is a growing mood that there needs to be more intelligent sharing of the burden of responsibility and an injection of more funds into the system. The devil is in the detail about who needs to be paying more. The UK low-cost compliance system has delivered low-cost compliance with legislation, but it has not really driven recycling forward, or driven producer responsibility that directly impacts on the actual producer of the actual products. That is where it gets sticky, because that is where you still find resistance.

If we are in a post-Brexit policy scenario where we are looking for moments of optimism—they are quite hard to find, but let us look for them—we have to try to tackle that and say that maybe there is genuinely a UK approach that will look a little different and will work. But it requires a bit more burden of cost and a bit more regulatory impact than there is current appetite for.

Dustin Benton: On the Brexit front, there is a real challenge for an organisation such as Defra. It has probably the largest load of regulations and rules to transpose across the entire national ground space of any single department. For a very long time, the EU has led waste policy and Defra has effectively become an implementer. Back in 2013, I received a letter from the then Minister of State saying, "We are getting out of waste policy because we do not feel we need to do anything. Effectively, the EU is doing it for us." That is not tenable after Brexit. We need to do it again, but it will take time, resources, money, people and thinking, which is a challenge.

On the producer responsibility point, at the moment producers pay around 10% of the costs of waste management in the UK, against 40%, 50%, and sometimes 70% or 80%. In France, it might even be 100% of the cost. The UK is well out of line with European norms.

On the point made by Lord Rooker, there is a lot of fragmentation in the system, which makes it difficult; 94% of people want to recycle and about a third of them get it right. People are not that stupid. I do not think it is because recycling is a hard thing. We have made the system difficult. We could fix it by having producers pay more for the system, but in exchange requiring local authorities to be more consistent in what they allow to be collected, so that as you cross a local authority boundary the bin is the same colour and the materials that are collected are pretty similar. That would make it easy and intuitive. We need to think about this from a user perspective.

The Chairman: I will take only two more responses on this, because I need to move on.

Hilary Stone: The EU definition of Extended Producer Responsibility shares responsibility for the product from the raw material itself, all the way through the various stages of production, down to the ultimate user of the goods. I do not believe that has ever been enforced in the way it might have been. If it were, and if we were to make it part of English law, it would give us an opportunity to ensure that, if you want to buy something that is difficult to recycle, you pay accordingly.

Steve Lee: It is very easy to think that Extended Producer Responsibility means packaging and plastics. It does not; it means all sorts of materials and products. The effect that the EU has on this is to require that each member state has a minimum of four Extended Producer Responsibility schemes, which the UK has. We have gone for the minimum: end-of-life vehicles, batteries, packaging, and electrical and electronic equipment—four. France has 27. It is for each individual member state to decide the materials and products for which it wants an Extended Producer Responsibility regime. That would be the same whether we followed the whole of Europe or wanted to tread a UK-only line.

There are other means of controlling producer responsibility. We have talked about some of them, such as tax. The Committee needs to consider the border issues that that would give us, if a material was taxed on one side of the border in Ireland and not on the other, and the inevitable links there would be to crime and organised crime. It is not as simple as some people would like to think.

Q7 **Baroness Sheehan:** I want to go back to the circular economy. Somebody—I cannot remember who—mentioned that it makes a huge amount of economic sense, as well as environmental sense. The Eunomia paper says, "The UK Government has not signalled a high level of enthusiasm for the EU Circular Economy Package". One of the barriers to the UK's take-up of that is the extra burden that would be placed on SMEs. As I understand it, if we were still part of the EU, there would be research and development finance packages available to upskill SMEs and impart that knowledge. Is that something that we will miss sorely on Brexit?

Mike Brown: It may well be. As I understand it, the current position with the Circular Economy Package in the UK is that its introduction may overtake our exit. In that case, it will become legislation, I guess. The question then is: what do we do about it? Do we decide to reverse ourselves out of it? That question remains.

The implications of having a Circular Economy Package without a quality Extended Producer Responsibility scheme would be quite worrying. We have heard some useful evidence here about how in the UK the polluter is not paying enough. To put it in a slightly different way, consumers are not paying enough; instead, taxpayers are paying the bulk of the burden. That is simply unfair. It stifles innovation and the incentives to reduce the impacts of using virgin materials and creating waste, right the way through from the design cycle to the product cycle. If the incentives are not there, that is stifled. These things need to go hand in hand.

While we are talking about rules, regulations and legislation, I will mention one other thing. I would argue that this is the only sector that exists because of regulation. Of course, there are lots of other sectors that need some regulation, but regulation and rules define this sector. For quite a long time, we have had a light-touch approach to regulation in this sector, on the back of reduced legislation generally in the economy. It has taken the sector backwards for quite a few years, for the first time in my 30 years' experience. We as consumers have to pay for what we choose to consume. We need to pay the whole amount, not just 10% or 20% of it.

We also need to regulate sufficiently to avoid the gaps in the system that loose regulation allows for. Earlier, Jacob talked about waste crime. It is a whole other topic, but we are experiencing a massive increase in waste crime. A light-touch regulatory approach just does not work in this sector. We need more of it, and it needs to be clever and consistent. This sector is defined by regulation, not impacted by it.

The Chairman: Baroness Sheehan asked about research as well.

Baroness Sheehan: Yes. I think we are going to lose that.

The Chairman: Do you have any thoughts on that? Is there a research angle?

Mike Brown: There is a huge amount of work and research to be done on how to design a more effective producer responsibility scheme so that ultimately the producer of the waste and the consumers pay. If you get the balance right, that is the way to mitigate the impact falling disproportionately on SMEs, for example.

The Chairman: I will take one sentence only from Ray and from Unico.

Ray Georgeson: My understanding is that the Circular Economy Package includes a significant fund for research and development for circular economy solutions. If the United Kingdom ends up delivering the Circular Economy Package, it is to be hoped that we will also be able to be beneficiaries of that fund, in the same way as the Government have guaranteed, at present at least, Horizon 2020 funding proposals that are still being made.

The Chairman: That is a useful point.

Unico van Kooten: I understand from Europe that at the moment there is a standstill on delivering pay cheques from the agencies responsible for handing over money to small and medium-sized companies in the UK, because of the current uncertainty about the divorce bill. That is one thing. The paradox is that very intelligent, bright and experienced people from the UK, such as the Ellen MacArthur Foundation and Eunomia, have heavily shaped the Circular Economy Package, but at the same time there is a standstill in the UK because of the crisis we are in at the moment. That is particularly unhealthy for young people in the UK, who are really focused on making this new future happen.

The Chairman: Steve, I will give you one sentence.

Steve Lee: This is an industry that cannot stand still. We depend on innovation. There is deep concern in the UK about cutting ourselves off from European sources of funding for innovation and in universities in particular cutting ourselves off from EU nationals who are an important part of our innovation.

There is a bright spot on the horizon: the Industrial Strategy Challenge Fund. The UK will have to find ways of replicating funding from the EU. It is our job to try to make sure that as many of those resources as possible are focused on circular economy issues. At the minute, the obvious topics, such as battery design and electric vehicles, are catching the attention. We want the circular economy to be recognised under the Industrial Strategy Challenge Fund, and that is something the Committee could help us with.

Q8 **Lord Selkirk of Douglas:** Are the differences in enforcement of standards with regard to minimum safeguards for hazardous waste likely to become a major issue?

The Chairman: It is good to get on to hazardous waste. Does anybody have thoughts on that area?

Unico van Kooten: In 2006, the Dutch Government did a feasibility study on whether to retain their own capacity for hazardous waste treatment. The Government decided that there was enough capacity available in countries such as France, Belgium and Germany that was environmentally the same and could deliver at a better price at the time.

At the moment, we do not have waste treatment capacity for hazardous waste. We rely on co-operation with other countries.

Dustin Benton: I am not a hazardous waste expert, but this touches on something that is being discussed in Brussels as part of the Circular Economy Package—the relationship between REACH and chemicals policy, and waste and hazardous waste. If the UK chooses to leave the REACH regime, it will be enormously bureaucratic and challenging for UK companies that want to figure out whether something is waste, whether it is hazardous, and how they should deal with it. Our recommendation would be to stay within the REACH regime.

The Chairman: I will take a comment from Steve. We will then move on.

Steve Lee: The answer to this is yes, potentially, in the long term, although probably not on day one after our exit from the EU. There are two issues. First, will we have zombie hazardous waste legislation, where we tie UK definitions to definitions that exist on the exit date, only to find that the rest of Europe starts to go in an increasingly stringent direction and the UK does not? A difference would then open up between UK standards and those in the rest of the EU. Secondly, it is quite possible that we will tread our own path on emissions standards for the future. Standards for emissions from the treatment of our hazardous waste could be weaker in the UK than those imposed through the EU.

Q9 **Lord Krebs:** I have two questions. One relates to something that Ray said earlier about labour. He mentioned the critical importance of non-UK EU citizens as part of the labour force. Would he or others like to elaborate on that?

My second question may already have been covered. We have just discussed innovation and alternative ways of using carbon-containing waste. When I chaired the Science and Technology Select Committee a few years ago, we did an inquiry into alternative ways of using carbon-containing waste, other than burning it and generating energy. At that time, we heard a lot of evidence about creating high-value products, such as platform chemicals for the pharmaceutical industry, from biological or carbon-containing waste. There was a lot of university research going on using, for example, microbial metabolism to achieve those transformations in a low-energy way. I wonder whether any of the experts around the table has an update on that. Was there indeed a burgeoning market for turning carbon-containing waste into high-value chemical products, rather than sticking it in incinerators, which is a low-value way of utilising it?

The Chairman: Perhaps we will take the labour issue first, because that has been a continuing theme of our Brexit inquiries. Ray, would you like to come back on that?

Ray Georgeson: I will take it on two levels. First, a number of my members are international, pan-European businesses. They are used to moving highly skilled technical staff around Europe, as they need to. There are genuine concerns about the ease with which they will be able to do that in the future, depending on how much bureaucracy is attached to the movement of labour post Brexit. I do not dismiss that concern. It was echoed yesterday when the BEIS Select Committee heard from Airbus, which said exactly the same thing about the technical mobility of labour.

The other, potentially more serious, area is around operatives—lower-skilled and semi-skilled labour in our industries. I will give you one particular example, which I have permission to describe. One of my members is a social enterprise, based in Belfast, called Bryson Recycling. It is a small business. It employs 230 people, primarily in the collection of recyclables from a number of local authorities in Northern Ireland. It also runs a materials recovery facility, where it sorts and processes materials on to the market. Twenty-five per cent of its workforce are non-UK EU nationals, mainly from the Polish community, resident in Belfast. Underlying its business risk is the increasing nervousness that many non-UK EU nationals have about whether or not we will have a secure agreement that guarantees their rights to live and work in the United Kingdom post Brexit. You cannot hide it. That is a serious business risk.

The Chairman: Does anybody else want to make a contribution on the labour side?

Lord Rooker: Can I follow up on that? We all have different backgrounds. What do the technical staff who are moved around do? What functions and areas do they deal with?

Ray Georgeson: I will give you a specific example. One of my major members is a pan-European company called DS Smith. It is on the FTSE 250 and is a large packaging company with operations across Europe. If there is a problem in a paper mill in Kent, it may wheel in a guy who is a senior engineer—a technician—in a similar mill in Poland, Germany or wherever it might be, to fill a gap that has arisen, either through sickness or because of a particular problem at the mill. The company needs, and often depends on, the ability to move that level of technically skilled worker around Europe quickly and easily. It is mainly at that sort of level—engineering, technical, skilled staff.

The Chairman: Unico, would you like to come in on labour? We will then move on to high-value conversion of waste.

Unico van Kooten: I have statements with me from the European Recycling Industries' Confederation, from the Confederation of European Waste-to-Energy Plants, and from the Swedes, the Germans and the Dutch. Within our European networks, we exchange information and knowledge, and we are profoundly glad that the UK takes part in that. That enhances and strengthens our position towards policymakers, enabling us to tell them what can be done and what is not possible at the moment, and to foster and stimulate innovation in a good way.

Lord Teverson, if I were to offer myself as a new employee of Defra, would that be possible in the new situation, or might it be a problem? I have 14 years of experience in waste matters. I have a lot of ideas. I am a very creative guy as well.

The Chairman: You probably have another two and a half years. You can put it right with us, if you want, Unico.

Unico van Kooten: Thank you very much.

The Chairman: While I remember, if the people who have diagrams that do not work particularly well when we are being webcammed could present them to our Clerk, it would be very useful to us. You had one or two, Dustin.

Can we go back to Lord Krebs's question about high-quality conversion of waste?

Jacob Hayler: My understanding of the latest situation is that four different biorefining projects are ongoing at the moment, at different academic institutions around the country. They are using waste as a feedstock and thinking about how it might be converted into higher-value products—chemicals, pharmaceuticals, et cetera. There is a possibility that those will be included in the chemicals sector deal, under the industrial strategy, and we would like to talk to the chemicals sector about that. In my personal view, commercialisation is unlikely before 2030.

Steve Lee: It is there in potential in the wastes. You are absolutely right. Jacob is right to say that it is potential; it is much more an innovation than an R&D issue at the moment. It is something we could benefit from. I draw the Committee's attention to the Government's Bioeconomy Strategy, prepared by BEIS, which touches on these issues.

Dustin Benton: We did a deep dive into this for the Scottish Government a couple of years ago, looking at what the challenges were. The basic story is that it looks as if it is very difficult to compete with cheap fossil fuels if you are trying to produce a bioproduct, so you need to go up the value chain to create a platform chemical. There are some challenges with that. The first is that we incentivise energy production, whether it is through anaerobic digestion or through advanced conversion. There is a subsidy pull away from platform chemicals and towards energy production.

Secondly, we make it really difficult to get the feedstock right. We did some work with the Green Investment Bank, as was, about an anaerobic digestion plant, which ought to be easy. It was processing something like 30,000 tonnes of waste per year on the edge of London. London produces in the order of 1.5 megatonnes of food waste per year. People thought that it would be easy and that it was a chemicals problem—how do we get the bugs to work? They found that it was a contract management problem. It needed 27 different contracts to get the food waste into the factory, and that was for something that is a pretty undifferentiated mass. If you want to extract something like Solanine from potato haulm, which seems like a pretty smart thing to do as it is quite high value, you need a long-term contract with a potato farmer so that you get that specific waste stream.

Those are the sorts of challenges that a strong resources and waste strategy from Defra, with some backing and policy, could deliver, but at the moment it looks as though we will end up with lots of good research and absolutely zero commercialisation, which is sad, but all too often the British story.

The Chairman: Dustin, you mentioned the Green Investment Bank. I need to declare that I am a Trustee of the Green Purposes Company, which has a green share in the Green Investment Bank.

Q10 **Earl of Stair:** I came to this meeting with just one word written down: opportunities. It has been a fascinating and very interesting morning. Various points strike me. Jacob, you said that we could not process our waste material in this country ourselves—we had to export it. Joshua talked about CHP systems. I know there are problems with that, to do with retrospective fitting in existing housing schemes. What strikes me at the moment, with the China market looking potentially doubtful, is that we are missing an opportunity to semi-process all our waste from this country into different categories, which could then be exported. Is that an opportunity? What are the obstacles? Should we recommend to the Government that they refocus their approach to dealing with waste on a large scale?

Jacob Hayler: I agree completely. It seems slightly perverse that we pay to send our waste across the channel, and then pay to get the power back in the opposite direction. There have to be opportunities there. As an industry, we have invested around £5 billion in new capital infrastructure in the last 10 years or so. We think that there is the same scale of opportunity again to invest in more plants to treat waste through energy recovery. On the recycling side, we have already had a discussion about producer responsibility. If you could strengthen that to create strong domestic markets, it would make economic sense.

Mike Brown: I will make just a brief comment, as I have made this point before. We definitely have an opportunity to develop more infrastructure. There is no doubt that we need more infrastructure; the real question is about the kind of infrastructure we need. If we are talking about the circular economy and driving value back into our materials, it has to be more about source segregation—keeping materials separate, so that they do not contaminate one another, and making sure that quality products are separate from lower-quality products. That is the way to drive value in. It dictates investing in a different kind of infrastructure, rather than energy waste facilities. It dictates a requirement for cleverer, smarter collection systems, for deposit refund schemes, for reprocessing facilities and, of course—working our way up the pipe, to before the waste is generated in the first place—for materials to be designed so that they get reused before they are turned into waste.

It is not a question of saying, "I can have a bit of both of those, if I want". It really is an either/or, in that—I say it again—you cannot recycle waste and burn it. You really need to make that choice first and to decide where you are going to invest. Once you have made that choice, you will know how much of the energy-from-waste type of infrastructure you need. Until you have made a decision about how much you are going to keep out of the waste stream, how much you are going to recycle and how much you are going to compost, and what infrastructure you need for that, you do not know what you will have left to burn.

Lord Young of Norwood Green: Can I pursue the point about having a cleverer, smarter collection system? We used to sort paper, glass, plastics and tins. Now it is all dumped into one bin. That did not seem very smart to me.

Mike Brown: It links back to Lord Rooker's earlier point, which was a really good one. To be honest, most things in waste management are pretty simple. We make them incredibly complicated. We are heavily involved in designing collection schemes for local authorities and, dare I say it, we make a lot more money in England than we make in some other places, because they are constantly reinventing the wheel. Every six or seven years, they reinvent the wheel. We then go back in and have to redesign it for them, because there is no agreed blueprint. I use that word deliberately, because we developed the blueprint for the Welsh Government. It costs a bit more, and it needs to be paid for in the right way, with producer responsibility, but one of the reasons why Wales is recycling so much more is that it has a one-size-fits-all policy.

The Chairman: This comes back to Lord Rooker's point.

Mike Brown: Absolutely. The Government have decided that they want weekly collection of food waste separately, weekly collection of recyclates—generally in a certain type of way—and collection of residual waste no more than twice weekly. That is just an example. Some local authorities push against that, but to some extent life is a lot easier for them, because they have very few choices to make.

If you do not have some guidance on the choices in the frequency of collection and the types of bins and the types of vehicles you use, it delivers hundreds of permutations. A simple, smart system that is the same across different local authorities has to be a sensible way to go. It may mean that we get paid less to design the schemes, but it has to be the right thing to do. That is what I meant by smarter. It is simpler, actually.

Joshua Burke: I want to comment on something Mike said about separating waste streams and deciding what to do. That illustrates the point that there are often conflicts in the waste hierarchy. We should be looking to move away from that, in its traditional sense, to something like a carbon-based metric, which is a much easier way of distinguishing the methods by which we dispose of or use certain materials. We should look at refreshing the hierarchy in that respect, towards an emissions-based target. It will then be easier to differentiate.

Ray Georgeson: At some point, any conversation about waste always ends up with your bin, at your doorstep. I do not want to carry on down that road, other than to say that I share Lord Young's frustration about the mixing of materials, but that is because my members want a high and consistent quality of feedstock to maintain the modern manufacturing base they own and are proud of. As Mike said, you get that better from separate collection of key materials.

I used the words modern manufacturing base because that is how we need to repackage and present ourselves. We have had a place in the government discussions about industrial strategy, but it has been a very modest place. We do not carry the cachet of pharmaceuticals or the automotive industry. We are not the Cinderella any more, but we do not carry that cachet. If we move into a period when there is genuinely a blank sheet of paper about how we restrategise the way we use resources and waste in England and the UK—Brexit may end up being the trigger for that, whether we like it or not—it will be a good thing. It could well be an opportunity, but it did not need to rest on the pressures of Brexit. It should have happened because it is an intrinsically good and right thing to do for the nation.

The Chairman: I could not agree more. Lee Marshall has a comment from the local authority side.

Lee Marshall: Local authority collections are in the middle of the chain, in effect. They are a function of the products that producers put on the market, which goes back to the earlier point about product design and whether it can be better. In fairness, packaging products have been very well designed for their primary function, which is avoiding waste. Where we have not been smart in their design is in what happens to them once that primary use is over. We are a function of that, and we are a function of the end market. If you cannot supply an end market with an economically viable material, you do not collect the material. The rest of the industry has been telling local authorities for years, "Do not collect it if you cannot put it into a viable market", so we are caught in the middle.

As regards how to do it, Wales has a blueprint, Scotland has a charter and England has a framework. We cannot even get the name consistent. Wales has had a blueprint for a number of years. Only about half the local authorities use it. That is not the primary reason why the recycling rates are high. The amount that we spend on waste management in Wales has gone from about £100 million to £250 million over about the last 15 years. That is the level of investment that has been put in—in fairness, by the Welsh Government and the local authorities themselves—so there are other reasons why things are working in Wales.

Local authorities review and change their collection systems not because they are reinventing the wheel but because, as was stated earlier, the economic environment in which they are operating has changed vastly in the last six or seven years. Whereas before, perhaps, recycling performance, led by EU legislation—the 50% target—was the driver, now it is the cost of the service, and how widely local authorities can provide their services with the shrinking pot they have. Unfortunately, those are the real drivers in England at the moment.

The Chairman: I will take brief comments from Steve and Jacob.

Steve Lee: I thank the Earl of Stair for saying that we need to look for opportunities, as well as problems. Whether those opportunities are here at home in the UK or whether they are overseas, I see this as driven not so much by Brexit as by a longer-term pinch on resource availability. Manufacturers in this country identify access to and the price of feedstock as their biggest business continuity issue. Our business is to make sure that they are fed with the right secondary materials, at the right price. Put very simply, our industry's responsibility is to place materials back in the market, at the quality and price that the market dictates. The responsibility of government and every other sector is to make sure that the demand is there. Without the demand, we are just overfeeding a market that does not want it. For me, it is all about quality, price and demand.

Jacob Hayler: On collection systems, the choice is between how much you want the householder to separate it and how much you want it to be mechanically separated subsequently. With regard to the latter option, technology is constantly improving over time and getting better at separating these materials. Whatever choice you make, there will be trade-offs involved in the cost of the system, the quality of the material that comes out and the quantity of material that is captured. When you couple that with the fact that local authorities have a very wide range of circumstances, with different types of housing stock, different access and different population density—whatever it might be—it is clear that they need some flexibility to work out the most appropriate trade-off between the different factors. That is why we think that those decisions rightly rest with local authorities.

Q11 **The Chairman:** I want to sweep up a number of issues that we have not gone through completely so far. Hilary, is there anything from the legal point of view that you need to register with us on what we have discussed so far?

Hilary Stone: No. The position on export of waste is well governed through the Basel Convention and the OECD decision. If we stay within the OECD Decision, that works for waste for recovery. Even though we might not be using the EU Transfrontier Shipment of Waste Regulations, that system and the OECD system are the same, so that is okay—unless there is a country out there that does not want to trade with us, in which case the position will be different. The core of law for export is firm, as was said earlier.

There are problems relating to transposition of legislation, which has never been fully done from directive to UK regulations. As I said earlier, in the future we will have to address each of those regulations, and decide what we want to do about it and whether we want to make any changes to it. One point that is addressed in the UKELA paper is whether we might think about changing the definition of waste. Lawyers who have been involved in this trade for a long time have argued for a change in that definition ever since we had the European definition of waste at the end of the 1980s. I do not think it is a practical proposition now, although you could argue for two definitions, one for an internal market and one that was outward facing. That would be great, because then we could go to a very simple definition: a product that is not new is waste, or, at the other end of the scale, nothing is waste until it is fit only for final disposal. If you did that, you would drop out a whole raft of waste regulation that you need to deal with and is costly to industry. We have all sorts of possibilities to play with. Whether we want to play with them is another matter, of course.

The Chairman: That raises a lot of questions in its own right, I suspect.

Can I come back to China? China was mentioned briefly—by Ray, I think. Is it likely to be an insurmountable problem, or is it something that might be put off?

Ray Georgeson: I would not say that it is an insurmountable problem. For the waste business, it is a bigger problem for the UK in the next couple of years than Brexit. The mood from the Chinese Government is very clear: they will severely restrict the amount of poor-quality material—paper and plastics—that comes into China. There will be some market adjustment. There are other markets for good-quality material, but they are not as large, so it will take time for there to be a sensible adjustment in the market balance.

It goes back to my previous intervention. If this provides us with the trigger that we need to rethink our approach to industrial strategy and how we build a sustainable manufacturing base that can sensibly utilise recovered materials closer to home and is less dependent on China than we have been over the last 10 to 15 years, it has to be a good thing, looking ahead. UK recycling rates have grown significantly on the back of the Chinese market in the last decade or so, when the Chinese were not very discriminating about quality. That has now changed for good.

The Chairman: I will take a sentence each from Unico and from Mike.

Unico van Kooten: We have to be aware that traders in low grades of plastic recyclables are under a lot of stress. What we do not want, of course, is sham recovery. That means that we have to uphold our standards, which is a mission statement of my association. In India, low-grade plastics are being used to make roads. Personally, I do not know whether that is the best way forward. We have to look into that. You can be sure of one thing: traders are under a lot of stress and are looking for outlets. That can come with sham recovery, so we have to be focused on that as well.

Mike Brown: The impact of China will be significant. As I said earlier, it is the trajectory we are heading towards. If the shutters come down on mixed plastics, mixed paper and mixed card as early as the spring, the shock to the system will be a lot higher than we would have liked and a lot sooner than we would have liked, but we are in a global market where, if we do not develop our own plan and become more proactive with our policies, plans and investments and take control, we will remain reactive to other nations' decisions. We will then be trying to mount a rearguard action to contain the impact.

Jacob Hayler: Quality requirements for paper are going up. We think that we will still be able to access China, but the cost will go up. The question is: who pays?

Hilary Stone: I would like to take the example of a particular secondary copper. It is called Birch Cliff and is part of an international classification system. At the moment, it is defined as having 96% copper content. That particular grade of copper will be unexportable to China, and it forms a very big part of what UK recyclers do. I do not think it is possible to overestimate some of the difficulties for trade that might be associated with the proposed ban.

The Chairman: We have just a couple of minutes. I will ask our witnesses—

Q12 **Lord Rooker:** The last thing I want to do is interrupt, because I was the one who said that we should finish before the Budget. An issue that was raised in our notes and in the introductions is Gibraltar. We have not really discussed Ireland, either. Those are two areas where our witnesses have expertise. It is 40 years since I went to Gibraltar.

The Chairman: Okay. Do our witnesses have thoughts on Gibraltar or Ireland? We mentioned Ireland slightly.

Lord Rooker: One witness mentioned Gibraltar in their introduction.

Steve Lee: It is my fault; I did. Gibraltar is totally reliant on Spain for its waste management, whether it is landfill, treatment, MRF or energy recovery. There is a hard land border between Gibraltar and Spain; I hardly need to point that out to you. When we are outside the EU, that will cause border problems.

In Northern Ireland and the Republic of Ireland, there is a much more difficult set of issues, especially if policy starts to diverge and we have taxation differences across the border. That could have an influence on waste crime, which is a bad enough issue as it is. I beg the Committee not to underestimate the importance of the Northern Ireland-Republic of Ireland border for waste and resource management. It is a crucial issue.

The Chairman: Ray, do you want to make any comments on that?

Ray Georgeson: I agree forcefully with Steve.

The Chairman: Thank you, Lord Rooker. That was very useful.

Lord Rooker: There were railway carriages in lakes in Northern Ireland when I was a Minister there. You would not believe the disposal processes that were going on. It was not called recycling, that is for sure.

Steve Lee: The hazardous waste strategy for the Republic of Ireland stresses the fact that it must be a whole-island issue, with cross-border co-operation. The Republic of Ireland is very strongly reliant on the UK for its hazardous waste management. About 40% of its hazardous waste comes to the UK. What will be the status of our special relationship with the Republic of Ireland one side of Brexit and the other?

Q13 **The Chairman:** Thank you. To finish, I will go around our guests to ask them if there is one thing they would like us to take into consideration in our move forward from this, which will be some sort of communication with the Government or the Minister. Ray, can I start with you? I am aware that Dustin has to go in a moment.

Ray Georgeson: It will be short and sweet. I know that it will not be popular, but you should not underestimate the seriousness of our members' concerns about the impact of the loss of the Single Market and Customs Union benefits. It is as simple as that, and I know that it is not popular.

The Chairman: We will try to fix that one for you.

Ray Georgeson: I know, but it has to be said.

The Chairman: Indeed.

Unico van Kooten: I think that I was quite clear in my introduction. We love you guys and we want you to stay. There is not much more that I can say. I have statements from a couple of European trade associations. I can deliver many more, and I will do so.

Mike Brown: For as long as I have been in this sector, we have pretty much relied on Europe to tell us what to do. The opportunity of Brexit is that we now have no reason to wait for that. We need to decide ourselves. We need our own waste plan. Wales and Scotland have a plan; they know where they are going. It is now time for England to do the same.

Lee Marshall: To a certain extent, I echo that. Regardless of whether it is the Circular Economy Package or an England or UK version, what we need, from a local authority point of view, is the direction and the funding to go behind it. That links back to producer responsibility. Scotland and Wales have plans, but they have vastly funded those to achieve the levels of recycling they are achieving. If we want to increase the household recycling rate in England, we need to figure out where the funding for that will come from.

Dustin Benton: One thing that we have not mentioned, but that I think is pertinent, is the role of the European Court of Justice. There are three areas where it is important. The first is existing waste precedents, to do with definitions and things like that. There is a risk of creating zombie legislation, where we are out of sync with Europe, but want to be in sync. The second is to do with the REACH regulations, which are deeply important in the balance between waste, hazards and so on. The third is ecodesign. That policy will determine, to a substantial extent, the amount of waste that is generated. The ECJ is important in all three of those areas.

Hilary Stone: I will end where I started. The UK jurisprudence issues and we need to deal with the European court, both are very important indeed.

Steve Lee: I suggest that the Committee looks at how Norway trades in waste. It does it with Sweden and Denmark, and does it without tariffs and undue disruption at the borders. On behalf of the sector, I would say that we have got used to uncertainty. We have become very good at dealing with it, but we have reached a point of maximum uncertainty, with lack of direction and lack of policy. We do not know what our objectives are, how we will be able to trade in waste and what future demand for our outputs will be.

The Chairman: If you have any comments on the Norway relationship, could you pass them on to our clerk? I am sure that would be useful.

Steve Lee: I will see what I can find for you.

Joshua Burke: We need to have a good, strong look at the EU Circular Economy Package and to question whether it appropriately reflects the UK context, both as regards the high recycling rates predicated on a high-value secondary market, which may not be there any more, and as regards the huge cost burden I alluded to in my opening statement. Is the option that the EU has chosen the most cost-effective? We need to question how appropriate it is for the UK to adopt that.

Jacob Hayler: With or without Brexit, we need infrastructure. That is a big message that has come across today. There is an opportunity to invest in new infrastructure, which is an economic opportunity as well as a green opportunity. How is that delivered? In their strategy, when they work it out this year, we need the Government, first, to set the right recycling levels; secondly—crucially—to set up the right policy interventions to meet those levels; and, thirdly, to give us long-term stability, so that the private sector can invest in what we need.

The Chairman: Thank you all for your contributions today. I thank Unico, in particular, for coming to see us. I will make sure that your gift is presented to the British nation. It is an excellent tile, and with a story. Thank you for that.

We will take this forward with the Government in one form or another. I bring the public session to a close.