

Environmental Audit Committee

Oral evidence: Toxic chemicals, HC 1805

Tuesday 30 April 2019

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[Watch the meeting](#)

Members present: Mary Creagh (Chair); Geraint Davies; Mr Philip Dunne; Caroline Lucas; John Mc Nally; Dr Matthew Offord.

Questions 119-263

Witnesses

I: Professor Rick Mumford, Deputy Director and Head of Science, Food Standards Agency, Professor Anna Stec, Professor in Fire Chemistry and Toxicity, Centre for Fire and Hazards Science, University of Central Lancashire, and Dr Michael Warhurst, Executive Director, CHEM Trust.

II: Robert Chantry-Price, Joint Lead Officer Product Safety, Chartered Trading Standards Institute, Dr Duncan Campbell, Public Analyst, Association of Public Analysts and Aberdeen Scientific Services, and Graham Russell, Chief Executive Officer, Office for Product Safety and Standards.

Written evidence from witnesses:

- [Centre for Fire and Hazard Science, Univ Central Lancashire](#) | [PDF version](#) () 
- [CHEM Trust - written evidence](#) | [PDF version](#) () 151 KB 
- [Chartered Trading Standards Institute - written evidence](#) | [PDF version](#) () 159 KB 
- [Defra \(with contributions from the Office for Product Safety and Standards\)](#) | [PDF](#) 

Examination of witnesses

Witnesses: Professor Mumford, Professor Stec and Dr Warhurst.

Q119 **Chair:** I welcome our guests for this, our second hearing into toxic chemicals in everyday life. So far we have had 48 written evidence submissions, and we have three very eminent scientists with us today. May I ask you to introduce yourselves, starting from my left?

Dr Warhurst: I am Michael Warhurst; I am executive director of CHEM Trust, a charity that focuses on chemicals policy, trying to get rid of the most hazardous chemicals and replace them with safer alternatives.

Professor Stec: Anna Stec, professor in fire chemistry and toxicity at the University of Central Lancashire.

Professor Mumford: Rick Mumford, deputy director and head of science, evidence and research at the Food Standards Agency.

Q120 **Chair:** Thank you all very much for being with us today. I will start with a question to you, Dr Warhurst: we heard last week that the UK has higher levels of flame retardants in mattresses, sofas, baby mattresses and pram mattresses than any other EU country and, given the actions taken by the United States, now higher levels than the US going forward. Why is that?

Dr Warhurst: I think the evidence you have already heard and received is that one of the big reasons is that there are flame standards in the UK, the open flame standards, which push the use of—

Q121 **Chair:** They are tests, aren't they?

Dr Warhurst: Yes, they are tests that have to be met, and they push the use of different flame retardants—brominated organophosphate flame retardants. Those tests really push it into the market; it is more difficult for companies to put furniture on the market in the UK if they do not meet those tests. It provides a barrier to trade for furniture from other EU companies, for example.

Q122 **Chair:** So it makes our furniture more expensive?

Dr Warhurst: It is quite possible. I don't know anyone who has studied it, but I know that the European Furniture Industries Confederation views it as quite a big barrier to trade. Obviously, a big company such as IKEA has no problems, but it is much more difficult for smaller companies to sell into the UK market.

Q123 **Chair:** In your considered view, do these flame retardants offer benefits?

Dr Warhurst: There are multiple aspects. Do they prevent fires? The evidence from the Government's own investigation was that they don't work very well.

Q124 **Chair:** Which studies are you citing?

Dr Warhurst: The study looking at whether the match test actually works—whether it is representative of the real world situation in furniture. Beyond that, you see to some extent an ever-growing list of chemicals, because the chemical industry moves. When one chemical is under threat, it spends many years trying to delay the moment that chemical leaves the market. By the time it gets to that moment, it will always have other ones coming up behind.

Chair: These regrettable substitutes.

Dr Warhurst: Yes, the regrettable substitutions. They are well aware that if you are a bromine company, you produce another brominated organic. There is a chemical that is still on the market—one of the submissions mentions it as being inert—called decabromodiphenyl ethane, which is found in increasing levels in polar bears.

Q125 **Chair:** So is that a persistent organic pollutant?

Dr Warhurst: Yes. The persistence is established—persistence and bioaccumulation. What is less known is how toxic it is. But obviously, if we find it to be toxic, we can't take it out of the polar bears, or indeed our own bodies. There is an attempt at EU level to ask the industry to get this extra safety data and the industry then appeals against that request. Eventually the board of appeal at the chemical agency says, "You should provide that data." That is already another two years on the market.

Q126 **Chair:** So it is cat and mouse.

Dr Warhurst: Yes, it is cat and mouse. It is all about delaying any action. One of the problems is that there is no downside for the industry, because although they have loaded another 10 years' worth of furniture with this material, they don't have any responsibility to clean up.

Q127 **Chair:** So there is no polluter pays principle?

Dr Warhurst: No.

Q128 **Chair:** What would it mean if there was a polluter pays principle?

Dr Warhurst: It would make a massive difference if you could really get something that said, "You need to clean up the mess you have made." As we have heard, there are tens of kilograms of brominated flame retardants in our homes. Many of those chemicals are banned or in the process of being banned, and no one really knows what to do. What do you do with all that furniture? If the chemical industry actually had to pay for that process, it would immediately change the economics of their process.

Q129 **Chair:** These flame retardants have been restricted internationally, as we heard last week. How successful have those restrictions been? What is the chemical industry's response and has it been a successful change?

Dr Warhurst: The first problem you have is that the products these things are used in are very long-living products. If you buy a sofa, you will



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probably use it for a number of years. It will sit in your house and maybe it will go to someone else's house. The chemicals that are out there stay out there.

Then there is the issue with recycling. For example, there is evidence that some computer plastics are being recycled back into food contact materials, such as black plastic scoops and lids, and researchers have found banned brominated flame retardants in them. You sometimes find them in toys. The classic example is not the actual Rubik's cube, but the imitation Rubik's cube, because it has black plastic. The good thing about black is that you can hide anything in it and just make it black, and no one will know what plastic is in there.

Q130 **Chair:** So imitation Rubik's cubes contain brominated flame retardants?

Dr Warhurst: Yes. That has been discovered by tests, including on some that we bought ourselves in Islington, for example.

Chair: Okay. We have several Rubik's cubes in one of my bedrooms, so I will have to go back and get you to do some tests on them.

Dr Warhurst: To be clear, it is not the original. Although they are calling it a Rubik's cube, it is not actually the Rubik's cube.

Q131 **Chair:** Breast Cancer UK said to us in evidence that the US and the UK have the highest recorded levels of flame retardants in humans. Does that concern you?

Dr Warhurst: Yes, it does, because we always have this delay between the use of a chemical and finding the big problems. There was a chemical called Penta—obviously an abbreviation—and that was really going up quite fast in breast milk.

Q132 **Chair:** PBDE?

Dr Warhurst: Yes. Penta-brominated diphenyl ether. It went up very fast in breast milk. You have associations, if you look at the research. We did a big report on the neurotoxicity of chemicals, on how they affect brain development, and there is evidence that Penta and other related chemicals have a negative impact on brain development.

Q133 **Chair:** In people who are grown up or in the foetus?

Dr Warhurst: The most sensitive period is always development; it is always the foetus and the development of the brain. The brain is very complicated and it does not stop developing until the early 20s. Some things we know damage the brain, such as lead. We know lead is bad and we have moved against it. Then there are other things where the evidence is accumulating, but it is very difficult to find a link between something a mother was exposed to when she was pregnant, or even before she was pregnant, and an outcome 30 or 40 years later; you can just about do that sometimes in occupational environments, if someone has been in the same factory all the time. So you have to work on the evidence you have, and our "No Brainer" report looks at the chemicals we really know about,



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such as lead, the ones we know something about, and the ones where we just don't know.

One of the problems with the debate on the toxicity of chemicals is that people will say, "This chemical isn't toxic", and what they actually mean is that our current estimate, based on the evidence we have, is that it isn't toxic. What you see with many chemicals is that they become toxic over time. But, obviously, toxicity is a fixed thing. PCBs, which we banned, had the same toxicity when they were first used as they do now, but we just estimated the toxicity. The problem is that you get this idea that it's really sound science to say, "The toxicity is this", and you say, "Actually, the evidence suggests, look at similar chemicals". If you were really doing a statistical estimate, you would say, "This is pretty similar to that one. Based on our experience with that chemical, this chemical will be just as bad".

Q134 Chair: Do you think it would be more accurate to turn it around and say that there isn't evidence of safety either way and that there's no evidence that it's not toxic? Or would that create a kind of panic, and we would end up with people feeling sort of paralysed in their own homes? Where is the risk register that I, as a consumer, can look at and see red, amber and green chemicals?

Dr Warhurst: The key thing we would say, and this is reflected to some extent in the EU system, is that if you have, for example, chemicals that persist and accumulate and are going to sit around in our fat and in polar bears or in our blood for decades, those chemicals should be moved away from. We shouldn't be using them. You shouldn't just be able to say, "Yes, it's accumulating in polar bears, but we don't currently know that it's toxic", because that creates these extra risks.

Q135 Chair: We have an estimated 45 kilos of flame retardants in our homes—in our fillings, in our foams—making up, by volume, 20% of the foams in our homes, leading to indoor dust levels that are 20 to 30 times higher in PBDEs than in Norway. Do you think that that is all down to these flame retardants?

Dr Warhurst: It would be mainly down to flame retardants in furniture. Obviously, there are some in electronics, which is a different legal structure. These are generally synthetic chemicals, so they are not going to come from anywhere else.

Q136 Chair: What are the alternatives, and do they maintain the fire safety side of things? Maybe I can move on to Professor Stec.

Professor Stec: Typically, we have two different categories into which we classify flame retardants: gas-phase flame retardants, for example brominated flame retardants or organophosphorus flame retardants that will work mainly in a gas phase; and condensed-phase flame retardants, which stay in a solid polymer, and so do not to the gas phase.

Q137 Chair: What is the gas phase? Like smoke?



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Professor Stec: Yes. Typically, what we have learned with the use of fire retardants is that manufacturers somehow find a way to meet furniture regulations by using fire retardants. What is happening is that fire retardants generally, on a positive note, are supposed to suppress ignition time, and slow fire growth. But if we are adding fire retardant to, let's say, fabric, more combustible material can be added at the same time, which will eventually, together with the fire retardant, quench in the gas phase. It will stop reactions in the gas phase. Typically, if you have clean flame it is getting you cleaner products. If you stop those reactions, you are going to generate more incomplete combustion products, which would increase toxicity and concentrations of other toxicants, which will overall create a more hazardous situation.

Q138 **Chair:** Are you saying that the flame retardants that we are currently using are creating more hazards in a fire?

Professor Stec: Gas-phase flame retardants. Generally, we found that they increase acute toxicants—carbon monoxide, hydrogen cyanide—in a gas phase, as well as chronic toxicants, which would also have an effect in an environment where they are persistent.

Q139 **Chair:** Which are those gas-phase flame retardants? Which ones are they?

Professor Stec: Generally, we have classified them as chlorinated, brominated ones and organophosphorus flame retardants.

Q140 **Chair:** So all the chairs that we sit on would be filled with these products.

Professor Stec: Yes, so generally, the two issues that we have are that adding fire retardants to a fabric increases the combustible material that will be combusted and generate fire effluence. Not in a fire, but there will also be leaching out, which is potentially another problem, because if the fire retardant is leaching out of the product—most of the fires that are happening are with the older furniture—there will be no fire retardant to actually protect those people.

Q141 **Chair:** So they are leaching out in dust as we rub against the product and then we are inhaling them, and they are accumulating potentially in our fat.

Professor Stec: Within the dust, yes. But then, if there is a high-risk fire incident, those fire retardants, because they leach out of the fabric, will not meet building regulations—sorry, furniture regulations—any more.

Q142 **Chair:** What alternatives to those harmful flame retardants are there?

Professor Stec: There are alternatives—for example, California has restricted the use of fire retardants—so not using fire retardants. What is interesting is that if you look at the fire statistics and fire deaths, if we compare UK fire deaths with European fire deaths, the trend is decreasing quite similarly, and Europe is not using fire retardants in furniture.

The other thing is that there were studies by the European Commission, which was reported as an Arcadis report in 2010, which took a point from



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industry that there is evidence that 50% of deaths are reduced by fire retardants. They did not find that evidence. Also, within the overall review, they actually said that there was no need to use fire retardants.

Q143 **Dr Offord:** I want to clarify a point. When you say reducing deaths and fire retardants, do you mean deaths from the inhalation of chemicals or do you mean fire?

Professor Stec: Fire deaths from inhalation of fire smoke.

Q144 **Chair:** So the EU said in 2010 that we did not need these things, but in 2019, the UK is still putting them in as standard.

Professor Stec: Correct.

Q145 **Chair:** Despite two consultations.

Professor Stec: Yes.

Q146 **Chair:** Have you submitted evidence to those consultations?

Professor Stec: Yes. Generally, the major issue that we have is that, at the end of the day, we think that human life should be most important, so fire toxicity should be regulated. Manufacturers can put anything into the product that will meet furniture regulations, so for example, to get that ignition time delayed or slow down fire growth, but toxicity is not regulated. It is not known what the potential threat to a human is.

Q147 **Chair:** Professor Mumford, we have heard about black plastic. What advice has the Food Standards Agency provided to BEIS regarding the ongoing review of the regulations? Have you been involved in that?

Professor Mumford: Yes, we have. We follow the current EU guidelines in terms of 1935/2004, which is the overall food contact materials regulations—the framework regulations. Within that, there are specific side regulations on recycled materials, and those are the ones that we currently, as the competent authority, work to.

In terms of our interest in those areas, we provide an active scientific input into the work of the scientific committees—SCoPAFF—and EFSA as the risk-assessment agency. We have a number of pieces of work that are ongoing in that area. One of the challenges we have is to look at areas where there is a large amount of innovation going on.

Obviously, as you are aware, plastics are a big issue at the moment, particularly driven by the idea of the sustainability of plastics and plastic pollution in the oceans. A lot of people in the industry—in the retail sector and in the food supply chain in general—are looking at ways to reduce plastic usage and looking for alternatives. That is obviously going to drive the use of recyclable novel materials in the food supply chain.

We are proactively taking an approach whereby we have just commissioned a piece of research—a small initial piece of research—with the national reference laboratory for food contact materials, which is Fera Science Ltd. It has done a major literature review looking at some of the

non-intended consequences of the move towards more sustainable plastic. From our perspective, we need to understand whether through taking a set of actions here to make plastics more sustainable we are changing things in terms of safety.

Q148 **Chair:** Okay, so at the moment you do not have the evidence because we are basically doing more and more recycling and we do not know what the black plastic contains—but you say it still meets European standards.

Professor Mumford: Yes. There should be compliance. There should be declarations of compliance when people are manufacturing these materials that an enforcement officer should be able to go and look at. It will show compliance.

Q149 **Chair:** How many tests have you conducted on these black plastic food packaging things over the last two or three years?

Professor Mumford: That is not data that I can provide you with.

Q150 **Chair:** Have you not conducted any tests?

Professor Mumford: In terms of official controls, that will be done at local authority level, so again the data will be there. That is probably something that I can go and—

Q151 **Chair:** We will have a second panel on that, but we know that the trading standards departments in every local authority have been cut, so would you say that there are fewer tests now than there were previously?

Professor Mumford: I cannot comment on the trend, but I can certainly go and find that data.

Q152 **John Mc Nally:** We are now moving on, if you can make this connection, to the pollutants that are within our food. When we are sitting on the couch having a TV dinner, we are not only getting a threat from the couch, or the chair or whatever; we are also thinking about the pollutants that are in the actual food. How do you monitor and test the pollutants in the food that we are eating? It is extremely important to everybody. Could you explain how human health is protected?

Professor Mumford: Yes, absolutely. We have been working in this area for some decades now, so we are aware of the impact that these persistent organic pollutants have on the food supply chain. We are looking at the routes into them. As has been talked about earlier, these chemicals are very persistent. They end up in the environment. It is the routes through into the food supply chain that we are concerned about, to try to mitigate the impact of them.

There are obviously a couple of routes. There is the idea that they will enter the food chain through absorption into plants—through materials being put on to agricultural land and then going through into the food supply chain and entering into livestock. You also have them accumulating in the oceans and seas, and then moving through the food supply chain, certainly from benthic organisms, moving up and accumulating in higher organisms—fish and cetaceans. Those are the organic routes.



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The other major route that we have is trying to make sure that they are not entering the animal feed supply chain. We know that that is one of the major routes. If you look at evidence, probably 80% to 90% of our foodborne contact with POPs is through animal products—through dairy, meat, fish and oils. Again, it is about how we then monitor and control the animal feed supply chain. There is a range of very detailed regulations that control good manufacturing practice, and guidance about how that is achieved.

There is consumer guidance as well. Part of our remit is obviously to protect the consumer when it comes to food safety. What we are then doing is providing specific guidance. A very nice example is, if you go on the NHS England website, there is guidance on eating oily fish. We all know that it is full of omega 3 and very good for nutrition, but obviously we also need to limit the amount because of the risk of contamination, because oily fish accumulate these persistent organic pollutants.

Q153 John Mc Nally: To continue on that theme, we are all aware of the Food Standards Agency, which will seek to monitor environmental pollutants in food after the UK leaves the European Union. I am also very mindful of the fact that the future of Scotland's vibrant food and drink industry depends on maintaining consumer confidence basically in Scotland the brand. In your opinion, would it be feasible for the Scottish Government and Food Standards Scotland to maintain higher food standards than the rest of the UK? Could you maybe develop that a wee bit and say how the Food Standards Agency co-ordinates with Food Standards Scotland, because I am unclear about how that will work?

Professor Mumford: We have very, very strong links with FSS—Food Standards Scotland. In fact, a lot of them are our ex-colleagues, so we know each other very well. One thing we do is that we have a whole range of different cross-cutting mechanisms in how we work. For example, in my area—science—I have regular meetings with science colleagues that go down to even very technical levels.

John Mc Nally: To what levels, sorry?

Professor Mumford: Technical levels—a range of levels. It is a multi-layered approach with our contacts. We are obviously very proud of the high levels of food safety and standards we have in the UK—in England, Wales, Northern Ireland and Scotland. How do we maintain those in a world potentially post EU exit?

We have done a huge amount of preparation to ensure that we can provide the same level of risk assessment, risk management, policy advice and evidence gathering as we do currently. I will give you an example. One of the things we have done is the new risk analysis framework we are building for the UK. This has involved a multi-tier approach to how we do this. We have greatly strengthened our capacity. For example, my team has grown by about a third in its risk assessment capability. That is now independent and separate from the risk management capability within

FSA—the policy directorate. We have created that along the lines recommended by Codex. We have created that separation.

We have also greatly strengthened our science advisory committees. Being very conscious of the fact that we might lose access to EFSA, as the current independent risk-assessment authority within Europe, we have greatly strengthened our science advisory committees. We will be appointing approaching 40 new experts to those committees, including the Committee on Toxicology, which is critical to the area we are talking about.

Q154 John Mc Nally: Have you confidence that the recommendations and risk assessments you make will be listened to by Government post Brexit?

Professor Mumford: Yes, we are. One of the underlying principles within the work we are doing in the risk analysis framework as well as in the piece around evidence generation and risk assessment—about how we are dealing with risk management and policy making—is the risk communication piece, and that is communication at all levels: to consumers but also to politicians and other stakeholders. That is one of the critical pieces. Underpinning a lot of that is the work we do around open and transparent policy making. If you look at our datasets, and the risk assessment and evidence we generate, it is all published. We are making policy in the open.

Q155 Caroline Lucas: How concerned should consumers be about chemicals contained in food contact materials themselves, such as packaging and utensils? Do we need to take steps to minimise our exposure?

Professor Mumford: It is a very complicated and fast-moving area and one where we need to be constantly vigilant. As part of our process, we are constantly horizon scanning and listening to new evidence. Once we get that new evidence, we can assess it and try to put it into risk mitigation and risk management procedures. Examples of what we have had to deal with in Europe are things like bisphenol A—how action was taken, how an evidence-based approach was taken and how there is now new legislation to deal with that. We will take those kinds of approach as well.

Q156 Caroline Lucas: Should we be saying to people, “If in doubt when getting a plastic thing to use in your saucepan, get a metal one”? Is that better, or will we just jump out of the frying pan into the fire?

Professor Mumford: I think we need to be slightly careful in how we present things. Our approach will always be to take a risk-based approach, so we would have to look at evidence to decide whether there was a genuine risk. The other option, of course, is that you go down to a precautionary approach, in which you just remove things on the basis that they might be risky. We need to decide which way we go, but our approach would certainly be to take a risk-based approach.

Q157 Caroline Lucas: Dr Warhurst, are we acting fast enough? It feels like we have had similar debates to these for many, many years, and we don't



seem to be much wiser in terms of taking action.

Dr Warhurst: The system does not work properly and I think that food contact materials—packaging but also pipes in factories—are a really good example of that. You have an EU harmonised list of chemicals that you can use in food contact plastics. That is separate from the REACH system and to an extent is not updated by the REACH system, so that list is a bit too stable. CHEM Trust organised a workshop in Brussels yesterday with people from EFSA and ECHA, three Commission DGs and some member states to discuss the issue. This is about plastic, but food contact materials are also made of paper, card, coatings, inks and glues. Amazingly, those materials do not have harmonised EU regulations, and do not have a harmonised list. Germany has dealt with paper and card, Switzerland has dealt with inks, and the Belgians and the Dutch have dealt with coatings.

Q158 **Caroline Lucas:** Are there obstacles to a harmonised approach?

Dr Warhurst: Partly, the issue has not had the profile it deserves. People are saying, "Let's move away from plastic towards paper and card." At least there is a harmonised regulation on plastic, whereas there is none for paper and card. We know that paper and card are often recycled. Bisphenol A, the chemical that disrupts hormones, has been mentioned and that has been known about for over 50 years. It is also used in till receipts, where it was being phased out. But till receipts will often go to paper recycling, which then gets into your pizza box. That has been shown in Denmark. There is a lack of regulation on that, and there is no specific regulation in the United Kingdom either. We have a big hole.

The other issue with bisphenol A is that known and proven biochemical agencies are being replaced by bisphenol S, a chemical that is almost exactly the same. The risk assessment committee at the European Chemicals Agency said that it probably has the same properties as bisphenol A, yet the industry is still classifying it. The last time we looked at the issue we produced the report "From BPA to BPZ: a toxic soup?", which was published in March 2018.

The European Chemicals Agency is looking at working on it. We pushed EFSA to do something, and they are looking at it. Meanwhile, in terms of things such as plastic bottles or till receipts, there is a chemical that is not new but is essentially different. The system is not protective. There is a problem of constant substitution with other problems, and then—particularly in food contact—you have these amazing gaps where lots of effort was put into listing plastic, but the law was never revised after REACH came in.

Q159 **Caroline Lucas:** What about consumers? How should we be communicating to consumers? What do we know that is helpful enough to tell them in terms of trying to make some kind of distinction when it comes to what chemicals are in different packaging?

Dr Warhurst: It is very difficult. We have been telling regulators that consumers expect these things to have been dealt with and regulated. Paper and card food contact materials are not subject to harmonised



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regulation and have just a general safety standard, and that is amazing. It is difficult for consumers. Manufacturers will sometimes say, "Oh we use the German standards for paper and the Swiss standards for ink and the Dutch standards for coatings." That is fair enough. Maybe the "best of sector" company is doing well but the long tail is not doing that.

People should avoid doing things that increase exposure. If you are going to microwave something, be careful about what you microwave it in. Microwaves heat up the material and make things more likely to migrate. You are safer microwaving in Pyrex than in other materials. I am not saying that there are not materials that are okay, but that is one example.

Caroline Lucas: If in doubt, take it out of whatever packaging it is in and stick it in a Pyrex dish.

Dr Warhurst: That is what I would do. The frying pan is an example. There is a group of chemicals—perfluorinated chemicals—that we have not discussed today. Those are used in non-stick applications and are used all over the place, including in cosmetics to make them slippery and shiny. But they are also in our blood, accumulating around the world. Again, you are dealing here with perfluorooctaine sulfonate and perfluorooctanic acid, which are the most famous ones. There is a long tail of several thousand other chemicals being addressed.

The Danish Co-op decided they did not want those chemicals anymore, and told their suppliers that. Their suppliers managed to move them out of all sorts of different products—cleaning products, and all sorts of things to make things shiny, slippery or whatever—and they were left with microwaved popcorn. For a period, they stopped selling microwaved popcorn. Then one of the manufacturers came along and said, "Actually, we've got a solution: we can do microwaved popcorn." You don't want popcorn to stick to the inside of the packet, so you need something slippery.

Q160 **Caroline Lucas:** Marvellous. CHEM Trust has proposed five principles for future legislation for food contact materials. Is it straightforward for the UK to implement those? Would there be a backlash because people say that is going to raise costs for manufacturers and thus for consumers, or is that not a big concern?

Dr Warhurst: At EU level, the arguments about why the other materials haven't been done yet is because plastic was very difficult; it took a long time and was very hard. So there is no way we can do that with paper and card. That is the EU-level resources. The likelihood, to me, of the UK suddenly saying, "Actually, we're going to do it all here," when the UK has not tried at all—at least Germany, the Netherlands and Belgium have done quite a lot of stuff. The UK is eventually following the principle of no gold-plating of EU regulations—therefore, why would we try to do something here, to fill a gap? I find it hard to believe that the UK would do that, because it requires a lot of resources. The EU hasn't managed to do it yet. There is a review going on at EU level; we would hope that the next



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European Commission will be under enough pressure to come out with a new law on this.

Q161 **Caroline Lucas:** Professor Mumford, do you have a reflection on the five principles that CHEM Trust has put forward?

Professor Mumford: Yes. We have already heard that part of the challenge is the sheer complexity of this. If we are looking at the sheer number of chemicals that might be in food contact materials, we are probably talking about tens of thousands, if not hundreds of thousands.

Q162 **Caroline Lucas:** So you are just going to sit back and do nothing?

Professor Mumford: No, no. I think that what we do is try and take a risk-based approach, and see where we can work with taking action on those. We do understand where some of the biggest risks are and how we can try to deal with those.

Q163 **Caroline Lucas:** How much work is happening right now on that?

Professor Mumford: If you look at the level of action that is ongoing—it has been alluded to. For example, at a European level we are reviewing the legislation. It has not been done for a long time; I think it is remiss that there hasn't been a full review of food contact material—

Q164 **Caroline Lucas:** What is the UK planning to do if Brexit happens?

Professor Mumford: At this precise moment in time, because we have fed into the EU regulation, because we have fed into the EFSA regulation, we will look at the approach that has been taken there and will take that approach into the UK at the point of Brexit. At that point, if we are then an independent country, we can review and see how we can deal with things.

Q165 **Caroline Lucas:** Are you confident that you have the resources to do that? If the EU has been struggling, with all the resources that the EU has, how are we going to manage it?

Professor Mumford: I think that is the problem: we need to be realistic about the task in hand. There is a huge amount of work to be done. If you think that something like EFSA can probably risk assess 20 individual molecules or compounds a year, say, if there are thousands that is going to be a massive challenge.

Q166 **Caroline Lucas:** So it is going to be almost impossible, isn't it?

Professor Mumford: It is getting to a point where it would be extremely difficult to go to a position where you just remove everything and hope that you can risk assess everything back into the supply chain.

Q167 **Geraint Davies:** I just want to ask Dr Warhurst whether he thinks that, with chemicals that have been banned, very similar structures that are basically substitutes should also be banned. Secondly, should black plastic not be used for microwaves, in terms of cross-contamination?

Dr Warhurst: First, on the similar chemicals, yes; we are definitely advocating that groups of chemicals should be banned. We and many



others have been saying for many years, for example, that brominated flame retardants as a group should go, because we are just finding more and more problems. There is more of a debate at ECHA, the European Chemicals Agency, on grouping. That is not really the case at EFSA, partly because EFSA's legal basis does not allow it in the same way. ECHA's is a bit more flexible. It is worth saying that ECHA has registered around 20,000 chemicals. They did a lot of work to try and break down, for example, things where people were talking about the same chemical with different names. Although 20 years ago when people started talking about reviewing the EU legislation on chemicals, they were saying, "It's 100,000", it has ended up at about 20,000. It will probably be the same on food contact, as more attention is given to it. Certainly, our method to deal with the fact that, essentially, the current EFSA system does not work—it cannot be done with so many chemicals—is to have a much closer link with REACH. That is what we were advocating yesterday.

Q168 Dr Offord: I want to follow up my earlier intervention about toxic smoke. How persistent is it? Is it possible that after it is released into the atmosphere it can stay in organic material, for example?

Professor Stec: Typically, fire toxicity is very strongly dependent on the fuel—what type of material is burning—and what type of fire it is, whether small or very big. Different combinations of toxicants will be released. Each fire will produce soot, and that will contain long-term persistent toxicants such as polycyclic aromatic hydrocarbons. Then, as part of the soot, a problem is that even if you have got toxicants that are not dangerous in a gas phase, they might be absorbed on particulates and then inhaled.

For example, to take fire retardants, those in the gas or fire will be broken down into smaller molecules. But, at the same time, they can be absorbed on particulates and then inhaled, and with long-term exposure they will have an effect on the human environment.

Q169 Dr Offord: Are there any alternatives to halogenated fire retardants that do not increase smoke toxicity but retain their fire resistance?

Professor Stec: Yes, there are two options. One is condensed phase fire retardants, which stay in a polymer state; they remain solid. The other one—this is definitely more expensive—is non-halogenated fire retardants.

Q170 Dr Offord: Which is used most frequently in the United Kingdom?

Professor Stec: For example, for cables there are non-halogenated options to replace the halogenated fire retardants.

Q171 Dr Offord: They are used more.

Professor Stec: They are being used. They are a little bit more expensive, but they are being provided and there is advertising for them.

Q172 Dr Offord: Let me get this right in my mind: they are used more, and they are more expensive.



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Professor Stec: Yes, in terms of using non-halogenated fire retardants, you have to put a little bit more into the product, and typically those fire retardants are a little bit more expensive, so the overall cost will be more.

Q173 **Dr Offord:** That is interesting. I understand from your research that you are engaging with fire services across the United Kingdom to determine how firefighters are affected by the effects of both toxicity of chemicals and smoke. How much further do you have to go with that? What are your preliminary findings?

Professor Stec: Generally, from world studies we know that firefighters have a higher-risk occupation and there is evidence that firefighters get cancer during their occupation.

Q174 **Chair:** Which types of cancer?

Professor Stec: Multiple types of cancer. I will come back to explain that a bit better. Typically the best studies were initiated and done in Canada on wildland fires, and the Nordic countries recently picked up studies on statistical data analysis. In the UK, the first studies were done by our team in 2017. We found that contamination of fire effluents on clothing, before and after exposure, is present on firefighters' skin. That led us to gather data, and we have statistical data analysis from Scottish firefighters looking at the cancer mortality rate. It is still unpublished, but we are finding that firefighters typically have more than one type of cancer, and the age shift within the last 10 years is towards a younger age, which reflects the introduction of plastics and plastics used.

Additionally, interestingly we are finding that lung cancer and oral cancer are much lower for Scottish firefighters compared with the general population. In Scotland, the typical cancers that we see much higher occurrences of are skin cancer or multiple melanoma or liver and kidney cancer, which is not directly related to inhalation.

Q175 **Chair:** What do you think it could be related to?

Professor Stec: Dermal intake—it is skin absorption. Firefighters have got clothing, and if they are dehydrated, with their skin and body temperature increasing, automatically within the linear response there is dermal intake as well.

Q176 **Dr Offord:** One of the variables will be the kind of clothing the firefighters wear. What have you looked at on the kind of clothing and the protection that they have?

Professor Stec: The studies—probably the first in the world—which we are doing with the Fire Brigades Union for the next four years are divided into three areas. One will look at the work environment and contamination that is in the offices, fire engines and private cars that part-time firefighters take. The other one will look at exposure for different types of toxins on the clothing; the permeability of the clothing, especially within the age; and then how much of those toxins get to the firefighter's body, so there will be blood and urine testing. We will combine that and we hope to have a better understanding and better data to answer that.



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Q177 Mr Dunne: I have also got a question for Professor Stec. In the light of your work following the tragedy at Grenfell Tower—we cannot talk about the incident itself because of the inquests that are ongoing—you are undertaking research into contamination of the areas around the tower. Could you indicate to the Committee what you think the continuing human health hazards are likely to be in that area?

Professor Stec: My studies were just to identify if there was any contamination in the environment following the Grenfell fire. We have taken specific markers that we knew came from insulation materials on the tower, which were reported by the scientific experts. We could find, for example, synthetic vitreous fibres that are specifically related to the cladding and combustible materials on the facade system. We should definitely follow up, in my opinion, by doing indoor testing of the closest locations and the houses and flats within the neighbourhood of the tower, as well as a proper soil analysis, to answer the questions, for example, on food and how bad the contamination is. My studies were just to identify if there was contamination in the environment following the fire. In terms of extension, that was what I called for: follow-up studies on the soil, which I understand will take place.

Q178 Mr Dunne: You found some very high incidences of residue materials—much higher than in the background situation in other places.

Professor Stec: Yes, we have taken persistent organic pollutants that were directly released from the fire—so it is not from air pollution and not from the historical background, but directly from the fire—and we found up to 160 times higher concentrations of some of the toxins.

Q179 Mr Dunne: Does that still pose a threat to human health or individuals if they come into contact with that material?

Professor Stec: If they are in the soil, and if there are really high concentrations of the toxins, which will be determined by further study, the biggest threat might be through dermal contact or through digestion. But in order to answer that question what also needs to be taken into account is the concentration, how often a person is exposed, and how much the person touches it and how frequently.

Q180 Mr Dunne: So it would now require physical contact through the skin in order to pose a threat.

Professor Stec: Correct. From my understanding of the air pollution, there is no threat, because it is too long after the fire.

Q181 Mr Dunne: Public Health England are obviously taking a close interest in the work that you are doing. The work that they have been doing independently has monitored air quality, and you say there is no air quality issue. You are confirming the PHE analysis.

Professor Stec: After such a long time I would expect that there would not be any threat, even close to the vicinity.

Q182 Mr Dunne: But you think there may be a current threat from



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contamination of the soil. Does that mean that the areas where the soil remains contaminated have been cordoned off, or does it spread across a wider area?

Professor Stec: For me there would be two concerns. One would be indoor: inside people's flats and houses. We know that a number of residents are still keeping fire debris in their houses, and there is potentially also contamination within that. Within the soil, some of the toxins will travel down with the rain. Some of the toxins will degrade and some will stay long term in the same form.

Q183 **Mr Dunne:** Are your concerns of a sufficient level that you have notified the local authorities and Public Health England in relation to specific properties in the vicinity?

Professor Stec: My role is on the science advisory group. Within the Committee, we are going to discuss it following our drop-in sessions with the community. We gather all kinds of ideas from the community. Sir Patrick Vallance chairs the scientific advisory group. We are going to discuss all the issues and then we will put recommendations.

Q184 **Mr Dunne:** When do you expect to report?

Professor Stec: Shortly.

Q185 **Chair:** Can I just take you back to that? You recommended that health authorities should take blood and saliva samples from survivors, firefighters and local residents to monitor any potential damage to their DNA.

Professor Stec: Correct.

Q186 **Chair:** To your knowledge, is that taking place?

Professor Stec: To my knowledge, it's not. There is NHS health screening for the upper respiratory syndrome, but not for the presence of fire effluents.

Q187 **Chair:** Why do you think that they don't want to do the blood and saliva sampling? PHE have said that they don't think it is a good method for determining exposure from a certain time or event. Do you think that they are wrong?

Professor Stec: I disagree with that, simply because of the fact that following the World Trade Centre attacks, the studies carried out on firefighters for five to 10 years identified high rates of cancers and all different diseases. I would strongly call for the same here, following the Grenfell fire.

The issue is that fire is a very niche area, with a very limited pool of scientific advisers, particularly in fire chemistry and toxicity. If we look around the world, we are the only ones doing fire toxicity. There are commercial tests on housing, but they are doing commercial testing, which is not necessarily looking at the human exposure to fire effluents.



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Q188 **Chair:** So you think that that is a matter of urgency now for the local health authorities?

Professor Stec: Definitely.

Q189 **Chair:** Would the areas around the site in which you found aromatic hydrocarbons—hydrogen cyanide, isocyanates and benzenes—qualify as contaminated land under the legal definitions? We have done a report into it and there is section 2A, which is about where land is officially contaminated. Does it reach that threshold?

Professor Stec: Isocyanates are highly reactive in soil so they will not be there, but they can be absorbed in particulates and absorbed on cold spots. We found that inside one of the flats 17 months later.

Q190 **Chair:** One of the Grenfell flats in the actual tower, or nearby?

Professor Stec: Outside of the tower, in a flat around 90 metres away.

Q191 **Chair:** So 90 metres away you found highly reactive material.

Professor Stec: We found isocyanates, which are respiratory sensitizers leading to asthma.

Q192 **Chair:** Seventeen months after the fire?

Professor Stec: Yes, correct.

Q193 **Chair:** You are saying that people have some of the fire debris in their flats still. What is that?

Professor Stec: Fire debris might typically be a burnt piece of the material from the facade, so insulation materials that were on the tower. Typically we found that it was difficult to find soot six months after the fire. Mostly we found fire debris, such as pieces of charred insulation material. In the form that it is in, you typically would have all of those toxicants compiled together in that fire debris, and very small pieces of it can get inside flats.

Q194 **Chair:** Are you recommending, then, that the local authority does a deep clean of all of the flats surrounding the Grenfell area?

Professor Stec: Yes, including extraction systems.

Q195 **Chair:** When should that happen?

Professor Stec: As soon as possible.

Q196 **Chair:** You are saying, essentially, that the residents who are there at the moment are breathing in these isocyanates.

Professor Stec: Some residents have written to me that following the fire they cannot breathe inside their flats, because there is a very strong, pungent smell, even though they cleaned thoroughly.

Q197 **Chair:** So are you worried about the ventilation systems of these flats?

Professor Stec: Yes. One resident showed me proof of that.



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Q198 **Mr Dunne:** Have you inspected the school's site, which has now been reoccupied, and are you concerned about any residues on that site?

Professor Stec: I did not inspect the school environment, but personally I would strongly recommend that the site's advisory group look at the school environment, indoor and outdoor.

Q199 **Mr Dunne:** Have you done that already, and do you know whether any action was taken?

Professor Stec: I have done that already. I put a publicly available statement to Public Health England, in terms of response, about six months ago, outlining what would be recommended as an urgent matter.

Q200 **Chair:** Has Public Health England looked at that school's site based on your recommendations?

Professor Stec: I am not aware that they have done so.

Q201 **Mr Dunne:** Are you saying that they may have done and you don't know, or that they may not have done it?

Professor Stec: I am not aware of any soil testing that has taken place after my studies.

Q202 **Chair:** Right. That is quite worrying. Can I just go back to the food side of things? To our colleague from the FSA, the PFOS and PFAS levels have been set very low. They are set at 13 nanograms per kilo of body weight. Current exposure in the UK exceeds these levels. They are very persistent and very bioaccumulative. What steps are the FSA taking to reduce the exposure in this country? Two quick sentences, please.

Professor Mumford: I am not aware at the moment of what action is being taken on those specific compounds, but I can provide a written response.

Chair: That would be very helpful. Thank you all very much indeed. This was a very troubling session.

Examination of witnesses

Witnesses: Robert Chantry-Price, Dr Campbell and Graham Russell.

Chair: I welcome our guests. It is always exciting to welcome guests from Wakefield—Dr Campbell, it is very good to see you again. It has been a long time since horsemeat, but we will always have that happy memory. Will the members of the panel introduce themselves, starting from my right?

Graham Russell: Good morning. I am Graham Russell from the Office for Product Safety and Standards, which is the part of the Department for Business, Energy and Industrial Strategy responsible for product safety, including the furniture regulations.



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Q203 **Chair:** Can you speak up, please? We cannot hear you very well and the mics are a bit weird in this room.

Graham Russell: Yes; I am Graham Russell from the Office for Product Safety and Standards, which is the part of the Department for Business, Energy and Industrial Strategy that is responsible for product safety, including the furniture regulations.

Dr Campbell: I am Duncan Campbell, honorary secretary of the Association of Public Analysts. I am a public analyst employed in Aberdeen. I also work on my own behalf in Yorkshire.

Robert Chantry-Price: I am Robert Chantry-Price from the Chartered Trading Standards Institute. I am one of the joint lead officers for product safety.

Q204 **Chair:** Could you sit forward a little bit as well, please? If you squeeze in a little closer to Dr Campbell, I am sure we will be able to hear everything you have to say.

Q205 **Geraint Davies:** Briefly, we have heard a lot about toxic and persistent chemicals. People will know about the problems with things such as MDF and formaldehyde in furniture. Can you all briefly say under what circumstances consumer products are tested for chemical safety in the UK? Who undertakes the testing and how are consumers informed about the results so that they can take precautionary action? Can we start with Graham Russell?

Graham Russell: The principal testing in the UK is carried out by local authority trading standards officers. That includes the full range of product safety responsibilities, which includes responsibility with regard to chemicals. They carry that out across the country at a local basis, based on local prioritisation.

The office that I lead was set up in January last year to provide additional capacity, not taking away from what local authorities do, but adding to that. It includes the capacity to support local authorities, to guide them, to provide them with resources for testing and to carry out testing ourselves. We have commissioned some research and will be carrying out testing in the fullness of time. At the moment, the principal testing is carried out by local authorities.

You asked about how they select items for testing. That is led on an intelligence basis. We support them with an intelligence unit, which works with their intelligence and border authorities, so that we know what is being sold in the UK and what is being imported. We look at records of results of complaints and investigations, and we have an intelligence base for that. That directs them in terms of what they look at. It is also risk based, so that they look at the most high-risk areas. Again, we support them in that.

On the communication of results, where there is a survey or something of that nature, the results will be published. If there was a prosecution, it would be publicly available. We also have responsibility for publishing

information for the wider community, including consumers, to ensure that they can make informed choices.

Q206 Geraint Davies: So are consumers being adequately protected, and could more be done?

Graham Russell: Whether more could be done is always a big question. Resources are finite. I think the previous panel spoke about trading standards resources, and I am sure my colleague will speak more about that. Whether more could be done with more resources—I am sure more could be done. What we are keen to do is to ensure that the resources that are available are well used and well directed.

In the last financial year, we made £500,000 available for local authorities to carry out testing, not just in regard to this area, but in regard to their testing of product safety completely across the board. We will continue to do that, so that where a local authority thinks there is something that should be tested, because it has been imported into their area, manufactured in their area or supplied, they will have the resource to do that.

Q207 Geraint Davies: Dr Campbell, are we being adequately protected? Will this £500,000 solve it all? It does not sound like much money to me, compared with the chemical industry.

Dr Campbell: As Mr Russell has said, it has been running over the last financial year. My experience in Aberdeen was that some samples were taken as a result of that. That is money coming in. Historically, there was very little consumer safety testing going on in Aberdeen, and I was in west Yorkshire for 20 years—there was very little going on. Winding the clock back to the '80s and '90s, there were specific groups of trading standards officers looking particularly at product safety, but as local authority finances were squeezed, they were one of the things that went.

Perhaps the uptake of the money that has gone into the testing has been patchy. Certainly I know from colleagues in Scotland that some of their local authorities do not have the trading standards officers on the ground to be able to go out and take the samples, even though the money has been provided for the analysis of those samples once they are taken.

Q208 Geraint Davies: So are you saying that cuts to local government finances are putting the public at risk from chemical contamination?

Dr Campbell: No, I am saying there is a risk that the public are not as well protected because of cuts to local government finances. I do not think you can say it in the way that you have said it, because we do not know—we do not know what the risks are, because the samples are not being taken, so we do not know whether they are being put at risk or not.

Q209 Geraint Davies: Right. We do not know whether they are at risk. Mr Chantry-Price.

Robert Chantry-Price: Can I just reinforce what my colleagues have been saying? Trading standards departments are on a very difficult wicket



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at the moment. There has been a 56% decline in the number of officers since the cuts started. Even before the cuts, they were not lavishly endowed with funds to do product safety testing.

The cost of testing is very high. If I can give you an example, I am involved with a company that is involved in some soft toy testing. They are testing some chemicals. They are just about to spend £20,000 testing some soft toys for a variety of chemicals. That is a pretty sizeable chunk just for one product. If a local authority were to challenge that, they would have to spend a similar amount of money on the testing. Then there are all the legal costs and the staffing costs in-house for the local authority as well. Local authorities at the moment just do not have that sort of budget, so the amount of testing that they are actually doing is very limited.

Also over the last few years we have missed a trick or two in the UK, in that there have been funds available from the European Union to undertake joint actions on a variety of consumer products. I regret to say that the UK has not played its part in being involved in those projects. Other countries have been able to get a lot of testing done, in essence, for free. As a consequence of that, the UK has tested less than it could have done if it had taken advantage of the European money that was available.

Q210 Geraint Davies: In other words, although there are an increasing number of chemicals and increasing imports of plastic toys from China and elsewhere, you are saying that we have not taken advantage of existing EU resources to test them. Obviously when we Brexit, if we do Brexit, there will be fewer resources again. Are you saying that British children are being put at risk potentially, and unnecessarily, by chemicals in toys being imported?

Robert Chantry-Price: Definitely, and the situation is getting worse. A few years ago, if people were bringing stuff into the UK, they would go to a shed somewhere or other and they would then be distributed out to the individual customers. Now, stuff is coming directly in from the far east, bypassing customs and everybody else, and landing straight on the consumer's doormat. The whole of our normal regulatory system can be completely bypassed. Even when you do get people bringing stuff in through the UK, I am still very worried about the amount of product testing that is available.

I brought some examples along with me to show you. This is quite an interesting one. This is a little keyring thing, which people might be interested in seeing, that was on the market before Christmas. My daughter bought it for her child. I suspect it has phthalates in it. The interesting thing is that this was bought via Amazon, through an Amazon subcontractor, and you will see when I pass it around that 98% of the information on it, including the warnings, is in Chinese.

Q211 Geraint Davies: In other words, you are saying that there isn't a central control for potentially harmful chemicals in toys and other products for import—they are coming through Amazon directly to consumers—there may not be information on them, and they may be harmful. You do not



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have the resources, and the resources you have are going to be cut. Is that right?

Robert Chantry-Price: That is correct. The other thing is that products are getting more and more complex. I brought another product along with me. This is in fact a flower burner that you put on your birthday cake. It costs about £3. This one has been used, but if I were a trading standards officer, the idea is—it is a firework, in essence—that you light the flame at the top, then there are candles on here that ignite and the thing does a little merry-go-round and plays you music. There is obviously some electric stuff in there as well. The cost of testing that is quite prohibitive for a £5 article. My particular worry about it is not that it would fail any of these tests but that if you put it on a small cake and there was a bit of a party atmosphere, as could easily be the case, it could actually, with all the candles alight, fall on a tablecloth. Suddenly, you have quite a large fire in a living room with lots of people around.

Q212 **Geraint Davies:** Right, and it might be dangerous if the plastic itself caught alight and they hadn't tested the toxicity of the chemicals in the plastic.

Robert Chantry-Price: Yes.

Q213 **Geraint Davies:** So you are saying that, increasingly, there are products to which children are exposed that could be toxic or dangerous, not enough is being done about it, and there is not enough regulation and not enough money for that regulation. Is that right?

Robert Chantry-Price: Yes. You will see that, on that one, it says it is tested to the UK fireworks regulations by a Chinese test laboratory. That particular test laboratory is not authorised under the EU to test fireworks.

Q214 **Geraint Davies:** Dr Campbell, do you have any comments about the exposure of children and others to more and more plastic products being imported in this seemingly unregulated, uncontrolled way? Is there anything more that could be done? What do you think should happen? Do you think we are at risk?

Dr Campbell: The whole business of internet sales does not apply just to toy safety; it also applies to food safety and food standards. As my colleague here said, the normal channels are bypassed—the article arrives on your doorstep or in your recycling bin—so it is difficult for the checks to take place, even though there were the mechanisms to do it. The risks are probably out there because there are so many more plastic items around, and coming from China without the relevant checks is risky whether you are talking about food or plastic toys—or any plastics, for that matter.

Q215 **Geraint Davies:** Finally, there has been some concern about MDF furniture and formaldehyde in people's bedrooms, with people's eyes streaming and people coughing and having all sorts of problems. Is enough being done to test everyday furniture that is in our homes? Obviously, we have all heard about problems with fire retardants, but there are all sorts of other chemicals, aren't there, that are potentially causing health problems?

Dr Campbell: That is not something I can comment on.

Q216 **Geraint Davies:** You don't know. Do you know, Graham Russell?

Graham Russell: If you will forgive me, I was going to go back to your question about direct imports. Obviously, the way we are buying products is changing, not only in the UK but around the world, so there are new risks emerging from direct imports, as you have described, but I would not accept that there is not work being done there. The two principal places those imports come through are the Coventry postal hub and East Midlands airport. We are working with both of them, with Border Force and trading standards colleagues there, on a risk-led basis. Obviously, the challenges my colleagues have described are real, and finding items is part of the challenge, but there is a risk-based approach and we are seeking to use that intelligence to identify these products. Obviously I will not comment on the individual products passed around this morning, but there are real challenges. We are seeking to ensure that the testing and enforcement regime, and the regulatory regime in total, deals with those risks.

Q217 **Geraint Davies:** Would you be happy to give that product there—the multi-burning, fire, plastic, singing-and-dancing, £5 product—to your daughter or granddaughter? Why hasn't it been blocked? Surely that is a vivid example of how the system is failing to protect children.

Graham Russell: I am happy to look at the records for whether this product has proved unsafe in practice, and if we can identify a source for it I will be happy to have it tested. At the moment, I would not be able to look at where it has been used and talk about the risks it presented. It was brought by my colleague as an example of the kind of challenges that enforcement officers are dealing with. My contention is that they are dealing with those challenges—although the supply of goods is changing and those points are well made, officers are dealing with those challenges day in, day out.

Q218 **Geraint Davies:** Are you saying that there are adequate resources to cope with this growing challenge? Mr Chantry-Price suggested that there are reducing resources for a growing problem. Are you saying that enough is being done? It seems very unlikely.

Graham Russell: I am saying that scarce resources are well deployed with a risk-based, priority-led approach.

Q219 **Chair:** How much money do you have each year in the Office for Product Safety and Standards? What is your budget?

Graham Russell: For product safety, the additional money made available to set the office up is £12 million a year.

Q220 **Chair:** What do you have to do the tests? What is the operational budget?

Graham Russell: That is the total.

Q221 **Chair:** So it is £12 million a year to do all of that, at a time when we have lost 56% of our trading standards officers. We are sort of backfilling the



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hole. In your evidence, you spoke about seizing jewellery with 1,200 times the permitted level of cadmium, which is a carcinogen. You mentioned 4,500 plastic monkeys containing phthalates, and 16,000 of those had already been previously imported. How come you are catching stuff once, and then it is coming in again and again?¹

Graham Russell: That is the essence of the risk-based approach. When market surveillance finds items, it is not just enough to take them off the market. We must also ensure that we deal with items that are coming in.

Q222 **Chair:** Where were those monkeys going to be sold—in toy shops or online?

Graham Russell: I don't know—both could be true. They could be imported directly and sold through retail, or sold directly.

Q223 **Chair:** And is Coventry the mail hub for international mail?

Graham Russell: Coventry is the postal hub, and East Midlands airport is where a lot of direct imports come in.

Chair: The freight. Okay, thank you.

Q224 **Caroline Lucas:** What percentage of products do your officers look at—how many products would they be looking at that come through either of those two entry points?

Graham Russell: To be clear, frontline work is carried out by trading standards officers directly, or by working with colleagues. My team support them with funding and so on. There is no set figure for how many products they look at—

Q225 **Caroline Lucas:** I know there isn't. I am asking for a rough estimate. It feels to me as if a tsunami of stuff is arriving—goodness knows how many millions of things are arriving—and with the best will in the world, the amount of resource we have at this end to try to take a risk-based approach seems wildly out of sync with the demand.

Graham Russell: The risk-based approach has served us well.

Q226 **Caroline Lucas:** Just to understand, does that mean that someone has to notice that peapod and say, "Ooh, this looks a bit weird. I'd better get some more information"? How do you know that that even exists?

Graham Russell: We don't have a system in the UK, either for UK production or imports, where every product is tested by the state before it goes on the market, but I don't think many developed countries do. I don't think we are out of step in that sense.

Q227 **Caroline Lucas:** What kind of percentage is being looked at?

Graham Russell: The percentage depends on the risk profile and intelligence.

¹ Correction: Evidence not supplied by Office for Product Safety and Standards. Figures quoted from National Trading Standards (2018), Annual Report 2017-18, p.63.



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Q228 **Caroline Lucas:** Give me an average. Are you looking at 0.001% of products coming through, or at 5%?

Graham Russell: I can't give you an average because the risk varies so much across different sorts of products.

Robert Chantry-Price: It must be in that order. The other places where they are coming in are the ports: Felixstowe, port of London and all the rest of it. On one of the projects that I was involved with—PROSAFE, which is the product safety enforcement forum for Europe—we had a meeting with customs officers about the import of fireworks, which was particularly interesting. Most of the customs agencies are doing it by looking at companies and giving them a risk profile. Basically, if it is a company that has a good record, they probably will not bother to look at it very often. If it is a new company or a company with a poor profile, they will identify it and say, "Right, next time something comes in from the XYZ company, we'll have a look at it."

It was particularly problematic with fireworks, because a lot of them were being imported in Europe through Rotterdam. In fact, they could be imported without any labels on, and the guys who had the fireworks could label them for different countries. You would never know that, five minutes after being labelled, they were the same lot that came through Rotterdam, because there were just no marks on the fireworks. The way you could trundle them through Europe was very easy indeed. We had a wonderful example in Malta, where nobody was authorised to transport fireworks from the docks to the shops, yet somehow they miraculously got there.

Q229 **Caroline Lucas:** Moving on, what benefit would full disclosure of chemicals in consumer products offer to consumers, public analysts and regulatory bodies?

Dr Campbell: In terms of the work of the public analysts—those who still maintain a capability for product safety testing—having a list of the things that may be there allows you to target your analysis more, because there is not yet a black box into which you can put something and get a result. You need to target the analysis. It would be useful for analysis, but in terms of consumers' perception, perhaps 90% would ignore it and 10% would not venture out of the house again. With any kind of labelling, it is very difficult to know what effect it has.

Q230 **Chair:** Isn't knowledge power, though? If we did microbeads and nobody knew that it was polyethylene, as soon as everyone knew that microbead was polyethylene, people would look for it and chuck it out when they found it. Looking at cosmetics now, you see the full ingredients. They might be dressed up in fancy Latin names, but they are still essentially glycerine and shea butter. Polyethylene is in some rather expensive lip balms that I was looking at the other day, and I was surprised to find the plastic still present on lipsticks. Isn't the principle to let the consumer know, and some people will work it out? That transparency is the way forward.



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Dr Campbell: Yes.

Robert Chantry-Price: But some products would have a dirty, great, big, long list of chemicals.

Q231 **Chair:** So does my lipstick. It has a dirty, great, big, long list. What does retinyl palmitate mean? Does that mean it is palm oil? I can go and translate it on Google; it is not that hard.

Robert Chantry-Price: Yes, but I think the general level of public awareness of some of these more esoteric chemicals is pretty low. For example, I suspect that this item has got some bisphenol A in it.

Q232 **Chair:** For the purposes of *Hansard*, can you say what you are holding?

Robert Chantry-Price: It is a glitter stick. If you shake it up and down, all the little bits inside glitter. If you say that it has bisphenol A in it, the man on the Clapham omnibus would never have heard of it.

Q233 **Chair:** The people on this Committee intend that the person on the Clapham omnibus will certainly know what bisphenol A is by the end of this inquiry, the purpose of which is to translate what you say into language that normal, ordinary people can understand.

Graham Russell: Can I just add to that? There is quite a lot of work going on, including a piece of research that we are carrying out. We have spoken to 4,000 consumers to try to understand how we close that gap. I fully accept that consumers often do not read or understand labelling, and do not use that information. To empower them, we need to close that gap, and we are committed to doing work in that area. The views of consumers are very revealing: they want to close that gap, and we need to find ways of doing that. Long lists of ingredients on the back of a packet do not necessarily do that, so how can we?

Caroline Lucas: I think most consumers would just assume that if it is on the market, it will have been tested and will be safe. Most of them would be horrified to discover that that is not actually the case.

Graham Russell: That is the first principle. I do not think labelling gets away from unsafe products. It is the responsibility of the suppliers to supply a safe product; it is our responsibility to create an environment in which that happens. Within that, if we want people to make choices, we need to inform them in ways that work.

Q234 **Caroline Lucas:** Does the consumer's right to know outweigh the propriety information requirements of manufacturers? Are there obstacles, in terms of manufacturers simply not wanting to admit to what is in their products?

Graham Russell: I am not aware that that is the barrier to putting information on labelling. I don't know whether colleagues have a different view, but I am not aware of that.

Robert Chantry-Price: The problem is how complex the product is. If it is something like furniture, which we were talking about earlier, and you



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use a brominated fire retardant, it would probably be fairly easy to say which one you have used. The problem then would be for Joe public to check out whether it is a banned one or not. I was talking to one of my Dutch colleagues about that, and he reckons that there are 200 different brominated fire retardants that you can use. Most of them fall into a fairly small group, but the options are still there to the X, Y, Z furniture company to use one of the less common ones. We don't necessarily know what the thresholds are for that particular brominated fire retardant.

Q235 **Caroline Lucas:** Is the UK involved in the AskREACH project?

Graham Russell: The UK is not directly involved. It is a European project, led by Germany. Like all European projects, we participate in some and we don't in others.

Q236 **Caroline Lucas:** Why aren't we? Apparently, 19 other countries are.

Graham Russell: We are observing it and, in that sense, we are connected with it.

Q237 **Caroline Lucas:** But why aren't we actually taking part in it?

Graham Russell: We are in a position of observing what's happening and learning from it. We will be publishing the UK chemicals strategy, which will talk about how we engage consumers in understanding this.

Q238 **Caroline Lucas:** There must be a reason why we decided not to take part in it. If you were looking from the outside, you might conclude that we weren't taking this as seriously as some of our European colleagues are.

Graham Russell: I would not conclude that. I think we take our engagement with control of chemicals and information to consumers very seriously. It is not the only way that consumers are being empowered and informed. As I say, we will have our UK chemicals strategy, which will deal directly with that.

Q239 **Caroline Lucas:** What will happen if Brexit takes place? We won't then be able to observe and learn from it.

Graham Russell: There is a broad dimension to that and a narrow dimension. I will take the narrow dimension. The approach that we are developing in regard to chemicals and the UK chemicals strategy, which I have referred to, will ensure that in the UK we have the information, the enforcement capability and the information to consumers that is necessary. The particular things that the European Commission have done through the REACH requirements will be carried out by the HSE.

Q240 **Caroline Lucas:** We have come back to the question of resources several times during this session, but it beggars belief that we could set up some kind of UK parallel to what REACH is doing, in terms of being able to establish the safety of chemicals. How many staff has the HSE got?

Graham Russell: The Government is committed to ensuring that protections do not diminish when we leave the European Union.



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Q241 **Caroline Lucas:** I know all that language, but I am asking you what it really means. If you haven't got enough people to do it, you can have nice reassurances until we are blue in the face, but they are not actually going to deliver on the ground, are they?

Graham Russell: I am sure you wouldn't want me to be drawn into the political dimensions of EU exit.

Q242 **Caroline Lucas:** I would love you to be, but I am not expecting you to be.

Graham Russell: Subject to the negotiations on the future economic partnership, we will have the ability to share information. It might be that we share purely what is being published through the REACH process, but that will be available and it will be used in our discussions and our evidence base.

Q243 **Caroline Lucas:** Very briefly, can I check whether the other two panellists have concerns about the UK's capacity to do that work post Brexit?

Dr Campbell: It is not something that I can comment on, simply because I don't know.

Robert Chantry-Price: I am concerned about the lack of resources to be able to do this.

Chair: Okay. Let's move along.

Q244 **Mr Dunne:** I want to follow Caroline's questions by asking about another aspect of leaving the EU, which is the rapid alert system, or RAPEX. At the moment, we are a member of RAPEX, which gives us alerts across Europe. I note from the briefing we have had that the UK tends to be something of an under-reporter of issues, compared with France and Germany. We seem to be reporting about a third of the amount of cases of concern each year. Is there a reason for that? I am not sure who has any responsibility for RAPEX.

Graham Russell: I am happy to check the figures and report back to you. My understanding is that the UK is one of the more effective users of the RAPEX system, but I will check the figures that you have given and make sure.

The UK has been heavily involved in developing and supporting RAPEX. It is an important system for sharing product safety information across enforcement organisations, businesses and consumers across Europe, and it is important that we maintain that sharing of data. We are committed to developing the maximum possible access to RAPEX, but we also recognise that we do not know what the outcome of those discussions will be. My part of the Department has built a product safety database over the past two years, which means that regulators in the UK and—as we develop the process—business and consumers will have access to better information about risks in the UK.



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We will do all we can to ensure that we share data with our colleagues in Europe, whatever the future relationship is. Some of the RAPEX data is publicly available, so it will be automatically available to us, and we are in dialogue about how to make sure that our systems work together.

My understanding is that we all benefit from sharing data: our colleagues in Europe share in our data, as we do in theirs. My expectation is that we will have a high level of data sharing, but of course that is subject to the negotiations. What we are sure about is that we will have a system in the UK that we can use to ensure that data is shared.

Q245 Mr Dunne: That is good to hear. Do we share data with any non-EU nation at the moment?

Graham Russell: The RAPEX system is specifically for the European Community, but we work with colleagues around the world, including through an OECD committee, through a professional bodies network and directly at a one-to-one level, particularly with countries such as the US and Canada that perhaps share product ranges similar to ours. So it is not just Europe; it is just that RAPEX happens to be for Europe.

Q246 Mr Dunne: Will that data be part of the new database that you are managing?

Graham Russell: Yes.

Q247 Mr Dunne: Inputted by other countries?

Graham Russell: We will make sure that there is a single source of data available to UK regulators, businesses and consumers that learns from the best of all data available.

Q248 Mr Dunne: The statistics that we have been given say that from 2018 the system received 2,257 alerts and 4,050 follow-up actions, of which the UK submitted only 99 alerts and six follow-up actions. So it appears that we have a small amount going into the database, but you are suggesting that we take quite a lot out as a user. Is that what you meant by your opening remarks?

Graham Russell: If the Committee is content, I would like to give you some data that looks across a period of time, to make sure that you have the full information.

Q249 Mr Dunne: That would be helpful, so that we can see what the trends are. Thank you.

Another thing that I was surprised by in the briefing is that there appears to be an invasion of slime and putty into the UK at the moment. There have been 17 alerts for toy slime products since January this year—the same number as for the whole of 2018. Taking that as an example, why do you think it might be? I think that slime is the most revolting product, but my children have used such toys over the years. They have a large content of boron—I do not know what boron does to you, but I hope it has not affected any of my children. Is this picked up online? Is it picked up through the notification process that you have been describing?



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Graham Russell: That particular case study was actually picked up by some sampling that Which? did. I put it on record that we are grateful to lots of people who do sampling in this area; it is really important, because we need a broad range of intelligent sources.

Q250 **Chair:** The question is why you are not doing it. Why are you relying on a consumer organisation to find that 14 out of 24 slimes sold in Hamleys, in WHSmith, in Argos and online fail the EU safety standards? Why is it them, not you, who are finding these things?

Graham Russell: I think that a broad range of people is interested in carrying out testing. That is really helpful, and we are grateful for it, but I should say that in this particular example—I will let my colleague talk more about the impact of boron—the limit is carefully set. You talked about putty and slime; I am far from being an expert on the difference, but there are different limits on how much boron is allowed in those two products. To some extent, this was a definitional problem as much as a safety problem.

With the experts I employ, we took this particular question to the trading standards community and the national product safety focus group because we wanted to get a broad view of whether this was a risk that we should be managing differently. The view of that group was that it was a low risk to health. That is the guidance they gave to trading standards colleagues. Although there is a standard there, which is there for a purpose and it is right that it is tested against that, we also have to ensure that we take a risk-based approach.

Q251 **Chair:** Okay, so, Dr Campbell, this is a low risk.

Dr Campbell: I haven't dealt with slimes and putty, simply because none of the local authorities I've worked for have submitted any for analysis. I do have a batch, taken through the OPSS funding, but the analysis has just been completed and I haven't started looking at the labelling and the results yet. Until I do that, I can't really comment because it is not a knowledge I have been refreshing over the years. I am not up to date with the current standards, I'm afraid.

Q252 **Mr Dunne:** But are you familiar with the consequences of boron? Is this from contact on the skin or from ingesting boron?

Dr Campbell: It would be more likely to be skin contact.

Q253 **Mr Dunne:** And what does it do?

Dr Campbell: I can't say authoritatively.

Q254 **Chair:** Risk to the heart as well. There are other chemicals in it, which cause mucous membrane irritation and liver damage, but we don't know about slime. Anything to add there, Mr Chantry-Price.

Robert Chantry-Price: I think it is a bit of a fashion. When you look, for example, at some of the RAPEX notifications, you will see that suddenly one year a whole stack of a particular product comes to the fore. This is a good example. Other examples are things like DMF and Chromium-VI.



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Suddenly you will find that somebody gets a bee in their bonnet about it. It could be a fairly low risk issue, like this is, but suddenly the number of RAPEX notifications for that particular product group whizzes up. When DMF suddenly got discovered in leather furniture there were 300 notifications that year. You have got to look at the number of RAPEX notifications with a bit of a jaundiced eye, in a way, if you are trying to read too much into the statistics.

Q255 Mr Dunne: That's helpful. A final question to Mr Russell: when do you expect your database to be live?

Graham Russell: We are developing it on an incremental basis, so that it was ready for what is called minimum viable product on 29 March, which of course was the date when we could have faced a no-deal exit, so we had it ready for that. It will now be developed in incremental stages over the next two years, to full operational operability. But it is ready at this point to the bare-minimum job that will be required. We have colleagues in east of England trading standards currently field-testing it for us.

Q256 Chair: We have looked at this. RAPEX alerts this year have covered tattooing, hair colouring, perfume, balloons, dolls, inflatable arm bands and children's jewellery. Mr Chantry-Price, are local and national trading standards adequately resourced to identify, test and enforce chemical safety, if we leave the EU?

Robert Chantry-Price: I don't believe they are.

Q257 Chair: You said that there has been a 56% decline in trading standards staff. Do you know how the budget has declined over the past eight—

Robert Chantry-Price: I don't have those figures but I'm sure the Trading Standards Institute could tell you that very easily.

Q258 Chair: Okay. In terms of the work being undertaken with the Health and Safety Executive to ensure chemical safety in consumer products is maintained after the UK leaves the EU, what work is ongoing that you are aware of?

Robert Chantry-Price: Very little, I'm afraid. One of the things that will happen when we withdraw from the EU is that we won't have access to things like PROSAFE's joint actions. A bad situation could get worse. That's the bad news; the good news is that 12 months ago, we got the OPSS established, and I am hoping for great things from them.

Q259 Chair: I have found in my brief a 46% reduction in nominal budgets since 2011. So, we have halved the budget and put back in £12 million for the OPSS.

I want to go back to the skin-lightening creams. Why are illegal skin-lightening creams on sale? I know of two places that sell those, which contain hydroquinone and corticosteroids, which cause irreversible skin damage and contain mercury, which is toxic and known to damage the kidneys, liver and brain. Why are these products on sale on the UK high street? Mr Russell, why are these skin creams containing illegal



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hydroquinone and corticosteroids still on sale?

Graham Russell: Forgive me, I was just checking with my colleague. There is consumer demand for skin-lightening products, which we know from the work that we and others have done in local communities. One of the benefits of the system that we have in the UK of local authority trading standards delivery is that they can respond to local situations. There is demand for products and that tends to be quite a localised demand in some parts of the country. We need to make sure that the product is safe and complies with relevant requirements: the GPSR and specifically cosmetic regulations. And we are—

Q260 **Chair:** But your whole approach is reactive. You are relying on me calling my local council's trading standards department, them existing and them having the ability to go out and spend thousands of pounds on testing to find out whether the product contains these illegal chemicals.

Graham Russell: I would not characterise it as reactive. We have an intelligence-led approach and we are currently working with local authorities on exactly this point—doing some sampling to make sure that these products are safe. And we look at that across the whole range. If you look at all the range of consumer products—

Q261 **Chair:** That was from the 2018 consumer harm report. National Trading Standards highlighted the risk from illegal skin-lightening creams. What testing has been done, on a risk basis, on those creams since that report was written last year?

Graham Russell: As I've said before, we have put money into local authorities to ensure they can do that testing. The range of the testing they have done in the last year has included, I understand, some cosmetic products; I believe it has included some skin-lightening creams. We haven't finally analysed the results of the last year, but we will be doing that in the next couple of weeks. And again, I will be happy to supply the Committee with information on the full range of products that were tested under that programme.

I will say—I think my colleague referred to this earlier—that putting money into testing is not sufficient in itself; we need to also make sure the capacity is there. In the first year of this process, that resource has not all been utilised, but we are continuing to put that money in, to make sure trading standards have access to it. And we are working with our colleagues in the Chartered Trading Standards Institute to train frontline trading standards officers so that they have the ability to use that information.

Q262 **Chair:** Okay. Very quickly, what work are you carrying out in the Office for Product Safety and Standards on the furniture and furnishings regulations, and when will that be completed?

Graham Russell: The Government consulted in 2014 and in 2016. We are working on the results of the Government response to the 2016 consultation. The Government will publish that response as soon as possible. I think our intention must be that we address some of the



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concerns that I have heard this morning and that I have seen in the evidence that you have received, to make sure that the absolute priority around fire safety, and the good record the UK has on fire safety, going right back to the 1988 regulations, is maintained. The Government is not prepared to step back from that, but we want to make sure that we maintain that protection while also ensuring that we can enable businesses to use fewer fire retardants, for the reasons that this Committee has heard.

Q263 Chair: So there is something that was carried out in 2016 and you are still working on it three years later?

Graham Russell: In that period, we have done a series of engagements with the scientific community, with the regulatory community, particularly with fire officers, and also right across Government—with science leads from each Government Department that has an interest in this. We have also commissioned research—I have mentioned the research—with consumers. We have also commissioned a piece of research about how fires operate in domestic premises to understand some of the questions that you were addressing to previous people, about smoke, about how products degenerate over time and about ensuring they are safe over that time period. These are all, if I may say so, complex questions, and we need to ensure that any steps that we take recognise not only the chemical risk, but the fire safety risk.

Chair: Given what we have heard this morning, the Committee is deeply concerned by the delays to that work and to the response on the flame-retardants-in-furniture standards. I would be grateful if you fed that back to the Department. We will be raising this with Ministers. Thank you all very much indeed for your attendance.