

Environmental Audit Committee

Addressing the risks from Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)

Ninth Report of Session 2024–26

HC 852

Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by His Majesty's Ministers; and to report thereon to the House.

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Summary

PFAS are a diverse class of thousands of chemicals widely used in everyday life due to their resistance to heat, water and oil. They are often referred to as “forever chemicals” because they do not easily break down. Their extreme persistence means that once released, they remain in the environment and can accumulate in the human body over time. PFAS are now present in almost everyone’s blood and can be found across UK rivers, soil, and wildlife. Evidence links PFAS with an increased risk of certain cancers, immune suppression, and fertility and development problems.

The UK Government recently published its first PFAS Plan, a welcome step. However, the Government’s plan is short on decisive actions to prevent the harmful build-up of these chemicals in the environment. Our inquiry found that the UK faces a growing legacy of PFAS pollution, alongside continued emissions. Tackling the scale of contamination requires a combined approach: prevent ongoing PFAS emissions at the source, manage pollution, and address waste and end-of-life disposal. This must be supported by sustained research, funding, monitoring and public transparency. The longer action is delayed in addressing the risks of PFAS, the greater the health, economic and environmental burdens will become.

UK REACH, the domestic chemicals regulatory framework, has fallen behind the European Union in restricting PFAS and is too slow to respond to emerging evidence. This weakens environmental protections and creates uncertainty for UK industry operating across diverging regulatory regimes. To prevent future harm and protect public health, the Government must now take a more precautionary and preventative approach. This requires accelerating the reform of UK REACH so that PFAS restrictions can be delivered far more quickly. The Government must introduce restrictions on PFAS in non-essential applications, such as clothing and food packaging, from 2027. Where exemptions are granted for clearly defined essential uses that protect the health, safety and functioning of society, the regulatory system must shift from a substance-by-substance approach to group-based regulation to prevent the replacement of banned PFAS with structurally similar and potentially harmful alternatives.

Protecting public health also requires long-term investment in research, biomonitoring and enhanced screening for groups with higher exposure, alongside the introduction of statutory limits on PFAS in food and agricultural pathways.

The Government must hold polluters to account for the release of PFAS into the environment, making them pay for clean-up and ensuring they are effectively deterred from future emissions.

Finally, the UK needs clarity and investment in viable PFAS remediation and destruction technologies. The Government should publish approved methods, invest in scalable solutions, including non-incineration technologies, and assess whether current incineration capacity is sufficient for rising volumes of PFAS waste.

Glossary

Bioaccumulation	The increase in concentration of a substance in an organism over time.
Epidemiology	The study of how often diseases occur in different groups of people and why.
Fluorochemicals	A class of chemicals that contain fluorine atoms, with applications including polymers, agrochemicals, pharmaceuticals, and lithium-ion batteries in smartphones and electric cars. Currently the majority of fluorochemicals are generated from the toxic and corrosive gas hydrogen fluoride (HF) in a highly energy-intensive process.
Fluorinated	A substance that has had one or more of its hydrogen atoms replaced with fluorine atoms.
Perfluorinated	Perfluorinated compounds (PFCs) are a class of synthetic compounds containing thousands of chemicals where all hydrogen atoms have been replaced by fluorine atoms.
Toxicology	The study of the harmful effects of chemicals, substances, or environmental agents on living systems.

1 Introduction

Per- and polyfluoroalkyl substances (PFAS)

1. Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) are a group of over 10,000 chemicals widely used in products and industrial processes.¹ They are commonly referred to as ‘forever chemicals’ because they are very resistant to degradation. PFAS are now widely found in humans, wildlife, rivers, soils and the atmosphere.² Professor Martyn Kirk, Professor of Applied Epidemiology at the Australian National University, described PFAS as “ubiquitous in society” and told us that the level of exposure to humans is so widespread that you can find PFAS “in the blood of most populations around the globe”.³ A growing body of evidence indicates that PFAS affect multiple organ systems, with reported links to immune suppression, some cancers, thyroid and liver dysfunction, fertility impacts and developmental effects.⁴
2. The Organisation for Economic Co-operation and Development (OECD) highlighted the growing interest by regulators in addressing legacy and novel PFAS.⁵ Dame Glenys Stacey, former Chair of the Office for Environmental Protection (OEP), said that resistance to degradation means that: “PFAS can build up in the environment to reach harmful levels. The use and regulation of PFAS are a matter of health and environmental concern in the UK and beyond”.⁶
3. PFAS are a broad class of chemical substances that can be sorted in many ways based on their structure, which leads to a variation of definitions.⁷ Experts have warned that efforts to narrow the definition of PFAS in ways that exclude certain substances are often driven by political or

1 Parliamentary Office of Science and Technology, [Regulation and remediation of ‘forever’ chemicals](#), June 2025

2 Parliamentary Office of Science and Technology, [Regulation and remediation of ‘forever’ chemicals](#), June 2025

3 [Q191](#)

4 [Q191](#) [Professor Sunderland] [Q8](#) [Professor Depledge].

5 The Organisation for Economic Co-operation and Development, [Per and poly-fluorinated chemicals \(PFAS\)](#), February 2024

6 Office for Environmental Protection ([PFAS0115](#))

7 Parliamentary Office of Science and Technology, [Regulation and remediation of ‘forever’ chemicals](#), June 2025

commercial interests rather than scientific evidence.⁸ They argue that if certain substances are excluded from the definition of PFAS, they will also be excluded from consideration in future regulatory regimes and that this could influence regulators to adopt “less protective policies”.⁹ We therefore welcome the Government’s commitment, published in their 2026 PFAS Plan, to adopt the OECD definition of PFAS (Box 1), marking a necessary shift from the narrower approach previously taken by the Health and Safety Executive (HSE).¹⁰

Box 1: Definition of PFAS

The OECD define PFAS as: “fluorinated substances that contain at least one fully fluorinated methyl or methylene carbon atom (without any H/Cl/Br/I/At atom attached to it), that is with a few noted exceptions, any chemical with at least a perfluorinated methyl group (CF₃-) or a perfluorinated methylene group (-CF₂-) is a PFAS”.

Source: Organisation for Economic Co-operation and Development, [Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance](#), 2021

Our Inquiry

4. We launched this inquiry in April 2025, to assess the risks posed by PFAS and examine the Government’s approach to managing them. During our inquiry, the Government published an interim position statement on PFAS (June 2025)¹² and its first PFAS Plan (February 2026).¹³ The Committee appreciate the constructive and coordinated manner in which the Department for Environment, Food and Rural Affairs (DEFRA) has engaged with us throughout the inquiry. We also acknowledge that this is the first UK Government to formally grasp the issue of PFAS and to bring forward a dedicated national plan. While we have raised criticisms regarding the scale

8 Environmental Science and Technology Letters, [Scientists’ Statement on the Chemical Definition of PFASs](#), June 2025

9 Environmental Science and Technology Letters, [Scientists’ Statement on the Chemical Definition of PFASs](#), June 2025

10 In the 2023 regulatory management options analysis, HSE adopted a narrower working definition of PFAS, removing the criterion that a single isolated methylene group (-CF₂-) is sufficient for classification as a PFAS. (HSE, [Analysis of the most appropriate regulatory management options](#), March 2023)

11 Hydrogen (H), Chlorine (Cl), Bromine (Br), Iodine (I)

12 Department for Environment, Food & Rural Affairs, [Interim approach to the PMT concept to support UK REACH risk management of PFAS](#), 4 June 2025

13 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

and ambition of that plan, these do not detract from the significance of this initial step nor from the positive way in which the Government worked with the Committee. In this report, we set out where the Government must now go further and take more decisive action.

5. We published 121 pieces of written evidence and heard from 23 witnesses across eight panels of oral evidence. Our witnesses included academic experts in toxicology, epidemiology, environmental health, chemistry, remediation and circular chemical management. We also heard from environmental charities, PFAS manufacturers, and industries that use PFAS or have transitioned to alternatives, including the sustainable technologies, firefighting and food packaging sectors. In addition, we took evidence from experts in chemicals policy, water and agriculture. Finally, we heard from officials at the HSE, the Environment Agency (EA), DEFRA, and from the DEFRA Minister for Water and Flooding, Emma Hardy MP (“the Minister”). We appointed Dr William D G Brittain, Associate Professor of Organic Chemistry, Chemistry Department, Durham University, as specialist advisor to our inquiry: we are very grateful to him for his advice throughout our inquiry.¹⁴
6. We visited France in November 2025 as part of this inquiry, ahead of the introduction of their PFAS legislation.¹⁵ During the visit we met Parliamentarians, government officials, industry representatives and NGOs. Our visit to France allowed us to examine an early national PFAS action plan, mandatory PFAS monitoring requirements for industrial emissions, and France’s forthcoming bans on PFAS in consumer products.¹⁶
7. We also visited Bentham, North Yorkshire, to hear firsthand how PFAS affects local communities and to see how manufacturers are managing and remediating PFAS contamination. As part of this visit, we held an engagement event near Bentham with local stakeholders, including residents, local authorities and health and environmental specialists, summarised in Annex 1.

14 Dr Brittain made the following declaration to the Committee: I have the following pecuniary interests: GlaxoSmithKline (research grant sponsor); AstraZeneca (research grant sponsor); F2 Chemicals (research grant sponsor and consultancy); Pleco Therapeutics (research grant sponsor); Centre for Process Innovation (research grant sponsor); and, NorthEast Pharma (research grant sponsor). I also have the following non-pecuniary interests: Royal Society of Chemistry (Member) and American Chemical Society (Member).

15 [Law No. 2025-188 of February 27, 2025, aimed at protecting the population from risks related to perfluoroalkyl and polyfluoroalkyl substances](#)

16 French Government, [Interministerial action plan on PFAS](#), April 2024

2 Preventing PFAS at the source

8. The use of PFAS in products and processes has been largely unrestricted for decades. PFAS are resistant to breaking down, which has led to their accumulation in the environment and increased exposure to humans. With evidence linking PFAS to serious health risks, preventing further releases at source is essential. In this chapter, we consider how the Government could act to restrict PFAS and prevent continued harm.

Applying the Environmental Principles

9. Professor Michael Depledge CBE, Emeritus Professor at the European Centre for Environment and Human Health, told us that the UK continues to allow highly persistent chemicals to be put into the environment before fully assessing “whether they are dangerous”.¹⁷ He characterised this as “a failure of our regulation” and questioned why action had not been taken, given that in 1998, the US Environmental Protection Agency knew about the problems of PFAS being highly persistent and “associated with an increased risk of cancer”.¹⁸
10. Section 17 of the Environment Act 2021 establishes a legal requirement for Ministers to produce an environmental principles policy statement (EPPS), which encompasses the following environmental principles:¹⁹
- **integration:** environmental protection should be integrated into the making of policies.
 - **prevention:** policy should aim to prevent environmental harm.
 - **rectification at source:** environmental damage should, as a priority, be addressed at its origin to avoid the need to remedy its effects later.
 - **polluter pays:** where possible, the costs of pollution should be borne by those causing it, rather than the person who suffers the effects of the resulting environmental damage, or the wider community.

17 [Q11](#)

18 [Q9](#) [Professor Depledge]

19 Department for Environment, Food & Rural Affairs, [Environmental principles policy statement](#), 31 January 2023

- **precautionary:** where there are threats of serious or irreversible environmental damage, a lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

These principles are intended to ensure that policy decisions protect nature, the environment and human health, particularly where scientific evidence is still emerging, but the risks of inaction are significant. When making policy, Ministers must have “due regard” to the Government’s EPPS, prepared under Sections 17 and 18 of the Act.²⁰

11. We have heard that the persistence and bioaccumulative nature of PFAS alone justify regulatory intervention, even where uncertainties remain about the toxicity of individual PFAS.²¹ Professor Martyn Kirk told us that “the big travesty here is the environmental persistence and the fact that many of them do bioaccumulate and they last in the human body for many years”.²² Professor Alan Boobis OBE, Professor of Toxicology at Imperial College London, further noted that the key challenge for policymakers is how we balance uncertainty “against the need to reduce something that is very persistent and very bioaccumulative”.²³ CHEM Trust, a charity focused on protecting humans and wildlife from harmful chemicals, stated that “waiting for conclusive data before regulation would lead to irreversible harm”.²⁴
12. Professor Elsie Sunderland, Fred Kavli Professor of Environmental Chemistry and Professor of Earth and Planetary Sciences at Harvard University, explained that when studying a new class of chemicals, it might take years to discover their impacts and that a decision needs to be made on whether to wait for the uncertainty to be resolved or “take a precautionary approach”.²⁵ With PFAS, Professor Sunderland told us that taking action would not even be considered “a particularly precautionary approach right now” because the evidence is “sufficient for regulation”.²⁶

20 Department for Environment, Food & Rural Affairs, [Environmental principles policy statement](#), 31 January 2023

21 [Q197](#) [Professor Kirk]; Marine Conservation Society ([PFAS0042](#)); Cousins, Ian T., et al. “The high persistence of PFAS is sufficient for their management as a chemical class.” *Environmental Science: Processes & Impacts* 22.12 (2020): 2307–2312.

22 [Q186](#)

23 [Q195](#)

24 CHEM Trust ([PFAS0031](#))

25 [Q197](#)

26 [Q197](#)

EU approach

13. A joint proposal, which could restrict more than 10,000 PFAS across the European Union (EU), was submitted to the EU in January 2023 by authorities in Denmark, Germany, the Netherlands, Norway and Sweden.²⁷
14. The European Chemical Agency (ECHA) conducted a six-month consultation on the proposal and received more than 5,600 comments from over 4,400 organisations, companies and individuals. As a result of the consultation, the five authorities published their updated proposal in August 2025, expanding it to assess eight additional sectors and to consider allowing certain PFAS uses to continue under controlled conditions.²⁸
15. ECHA's Risk Assessment Committee and Socio-Economic Analysis Committee (SEAC), composed of independent experts from EU Member States, have been evaluating the evidence. The Risk Assessment Committee (RAC) concluded in its final opinion that PFAS pose growing risks due to their extreme persistence, mobility and links to serious health impacts, and therefore supported adopting an EU-wide restriction to control their emissions.²⁹ SEAC's draft opinion also supported a broad restriction, with targeted derogations only where no alternatives exist and where the costs and benefits justify them, noting that EU-wide action is needed to maintain a level playing field.³⁰ ECHA aims to complete its full assessment of the restriction by the end of 2026.³¹
16. During our visit to Lyon, France, we heard that the impending PFAS regulations in France, introduced ahead of the EU, led some manufacturing facilities to cease production of certain products.³² DuPont de Nemours, Inc, an American multinational chemical company, told us that the lack of consideration for critical use of PFAS in the EU has "created significant chaos" and could lead to slower economic growth.³³

27 Germany, the Netherlands, Denmark, Sweden and Norway (Dossier Submitters), [Background Document for the proposed universal PFAS restriction under the REACH Regulation](#), 2023

28 European Chemicals Agency, [ECHA publishes updated PFAS restriction proposal](#), August 2025

29 European Chemicals Agency, [ECHA supports PFAS restriction with targeted derogations](#), March 2026

30 European Chemicals Agency, [ECHA supports PFAS restriction with targeted derogations](#), March 2026

31 European Chemicals Agency, [ECHA receives more than 5 600 comments on PFAS restriction proposal](#), September 2023

32 Parliamentary Office of Science and Technology, [Regulation and remediation of 'forever' chemicals](#), June 2025

33 DuPont de Nemours, Inc ([PFAS0079](#))

17. The EU’s consultation and assessment process highlighted a significant and evolving evidence base, covering more than 10,000 PFAS substances across multiple sectors. The scale and depth of the EU’s evaluation will likely shape regulatory positions internationally and is expected to provide a substantial body of toxicological, socioeconomic and sectorspecific analysis.³⁴

UK PFAS Plan

18. The Minister told us that the UK Government is taking a different approach than the EU. She described the EU as attempting to “ban them all” and then carving out exemptions, while she said the UK was instead adopting a “bottom-up” model with restrictions on individual chemicals and their uses. However, she added that “we need to change the system [so] we can quickly catch up with the European Union”.³⁵ Marc Casale, Deputy Director, Chemicals & International at DEFRA, said the UK intended to see what decisions the EU has made and then draw from them.³⁶
19. The Government’s own PFAS Plan acknowledges that policy decisions on PFAS must have “due regard” to the EPPS.³⁷ However, the UK’s lack of commitment to restrict PFAS, in the same way as the EU, and instead make assessments of individual restrictions gives rise to questions of whether this approach is consistent with the principles outlined in the EPPS. The UK’s approach enables continued use of PFAS until each individual chemical is assessed and restricted, rather than preventing foreseeable harm upfront. By choosing not to introduce broad PFAS restrictions despite clear scientific evidence of their persistence and accumulation, the Government is delaying action in ways that will significantly increase the future burden of clean-up. As Duncan Sanders, Director for England at ATG Group,³⁸ put it: “even if you shut the door completely today, we have enough in the environment to keep us going for a very long time”.³⁹ It is therefore critical to prevent PFAS emissions at source by restricting and limiting their production and use.
20. Information is vital to addressing the challenge of PFAS in the environment.⁴⁰ The Minister said that the significant emphasis on research and monitoring in the PFAS Plan is a positive.⁴¹ While robust data is essential, it must be

34 Institute for European Environmental Policy UK (IEEP UK) ([PFAS0106](#))

35 [Q275](#)

36 [Q277](#)

37 We have repeatedly called for greater transparency in how the EPPS is applied to Government policies: Environmental Audit Committee, Sixth Report of Session 2024–26, [Environmental sustainability and housing growth](#), HC 439; Oral evidence taken on 10 May 2026, [Q17](#) [Emma Reynolds]

38 A company that offers environmental and waste remediation services

39 [Q184](#)

40 [Q270](#) [Liz Parkes]

41 [Q295](#)

used to inform and drive policy action. Fidra, an environmental charity, told us that focussing on monitoring alone, without corresponding measures to prevent emissions at source, will not meaningfully reduce PFAS in the environment.⁴²

21. The Government's PFAS Plan places significant reliance for progress on voluntary, industry-led initiatives such as the Chemical Industry Association's PFAS Information Exchange Forum,⁴³ alongside "transparent self-regulation".⁴⁴ The Minister told us that the Health and Safety Executive's (HSE) candidate list, a watchlist of chemical substances identified as potentially hazardous,⁴⁵ "has an important role to play in its own right by saying and signalling to people that these are areas of concern".⁴⁶ However, adding substances to the candidate list does not amount to restricting them. This approach, therefore, raises concerns about the Government's commitment to introducing meaningful controls on PFAS.

22. **CONCLUSION**
PFAS are highly persistent, bioaccumulative chemicals with the potential for long-term environmental and human harm, despite ongoing scientific uncertainties around the toxicity of different PFAS.

23. **CONCLUSION**
The Government's PFAS Plan disproportionately focuses on expanding PFAS monitoring rather than preventing or remediating contamination. Applying the Government's own environmental principles demands decisive action now to limit further release and exposure.

24. **CONCLUSION**
Voluntary action on PFAS and self-regulation by industry are not sufficient to ensure transparency, accountability or reduce PFAS emissions.

42 Fidra ([PFAS0025](#))

43 Chemical Industries Association, [Shaping the Future of Chemical Policy: A Look Inside CIA's Regulatory Work](#), 23 September 2024

44 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

45 The UK Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Candidate List is a list of SVHCs identified in accordance with Article 59 of UK REACH. SVHCs are substances of very high concern that may be considered for authorisation. (Health and Safety Executive, [UK REACH Candidate List of substances of very high concern \(SVHCs\) for authorisation](#))

46 [Q278](#)

25.

RECOMMENDATION

The Government must act in line with the environmental principles, taking preventative and precautionary action to reduce cumulative PFAS exposure to both people and the environment. We expect the Government to set out in its response how its approach to PFAS has been developed with due regard to precautionary principle within the environmental principles policy statement.

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

26. The HSE is responsible for administering UK Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), which covers PFAS registration, evaluation, and potential restrictions (Box 2). Since the UK's exit from the EU and the establishment of UK REACH, separate to EU REACH, there has been considerable divergence on the regulation of PFAS between Great Britain (GB) and the EU.⁴⁷
27. The Government has committed, through their PFAS Plan and Environmental Improvement Plan,⁴⁸ to take regulatory decisions from “trusted jurisdictions” as the default basis for UK decisions, with explicit reference to the EU. However, the Government's own target for enabling this alignment for UK REACH is December 2028, more than two years away.⁴⁹

Box 2: UK Registration, Evaluation, Authorisation and Restriction of Chemicals

UK REACH is a law that applies to the majority of chemical substances that are manufactured in or imported into GB (England, Scotland, Wales). REACH stands for [registration](#), [evaluation](#), [authorisation](#) and [restriction](#) of chemicals. It applies to:

- a substance on its own
- a substance in a mixture, for example ink or paint
- a substance that makes up an ‘article’ - an object that is produced with a special shape, surface or design, for example a car, furniture or clothes.

47 [Q286](#) [Emma Hardy]; Office for Environmental Protection ([PFAS0115](#)); Institute for European Environmental Policy UK ([PFAS0131](#))

48 [Environmental Improvement Plan \(EIP\) 2025 - GOV.UK](#)

49 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

UK REACH was brought into UK law on 1 January 2021, following the UK's withdrawal from the European Union, to bring the EU REACH Regulation into UK law. Under the terms of the Northern Ireland Protocol, EU REACH continues to apply in Northern Ireland.

The REACH Candidate List is a list of substances of very high concern identified in accordance with Article 59 of UK REACH. Once a substance is placed on the candidate list, it may then be considered for addition to the authorisation list. If it is moved onto the authorisation list, its use becomes prohibited after a specified date unless the use is exempt or a specific authorisation has been granted.

Under REACH, restrictions are used to limit, prohibit, or place conditions on the manufacture, placing on the market, or use of a substance or group of substances. They are designed to protect human health and the environment by controlling the risks posed by chemicals whether they are used on their own, in mixtures, or in finished products.

Source: Health and Safety Executive, [UK REACH](#)

- 28.** The Minister told us that there is divergence between GB and EU regulation “because the previous Government after Brexit set their own system”.⁵⁰ As the EU continues to update its candidate list and authorisation list (Box 2), and implement restrictions, the UK has not kept pace, creating growing regulatory differences. She explained that “from when we left the European Union to the point we came into government” the EU added 42 substances to the candidate list and five to the authorisation list whilst the UK added zero to either list.⁵¹ Regulatory divergence between EU and UK REACH has been formally discussed through the Trade Specialised Committee on Level Playing Field for Open and Fair Competition and Sustainable Development under the EU-UK Trade and Cooperation Agreement, including at its meeting of 4 October 2023.⁵²

50 [Q278](#)

51 [Q278](#)

52 Cabinet Office and Foreign, Commonwealth & Development Office, [Minutes: Trade Specialised Committee on Level Playing Field for Open and Fair Competition and Sustainable Development under the EU-UK Trade and Cooperation Agreement: third meeting, 4 October 2023](#)

29. DEFRA and HSE both told us that the UK’s current REACH restrictions process is slow, with multiple mandatory and lengthy consultation and assessment stages.^{53 54} The Minister said the process has limited the Government’s ability to act quickly on PFAS. Dr Richard Daniels, Divisional Director of Chemicals Regulation Division at the HSE, acknowledged that any restrictions of PFAS in firefighting foams in the UK will come into effect after the EU: “depending on how fast the legislation comes in, it may be one or two years”.^{55 56}
30. There is, however, scope for the Government to act faster. The legislation sets maximum timelines for each assessment stage, not minimums.⁵⁷ The Government could accelerate the process either by legislating to amend timelines for each assessment stage, or where delays arise from resourcing constraints, by reprioritising work within the existing framework. Without change, the UK will continue to trail behind the speed of regulatory decisions taken internationally, even if the evidence is clear.
31. We heard that the UK’s slower REACH process is further compounded by a lack of access to early scientific evidence originating from the EU.⁵⁸ Dame Glenys Stacey, former Chair of the Office for Environmental Protection (OEP), explained that because HSE does not have access to data on chemicals held by ECHA “regulatory decisions that are being made based on the fuller data held by ECHA are not being incorporated into UK REACH”.⁵⁹ Dr Richard Daniels, Divisional Director of Chemicals Regulation Division at the HSE, corroborated this claim.⁶⁰ Dame Glenys said that as a result of this lag “no restriction processes have been completed under UK REACH”.⁶¹ Until

53 Marc Casale, Deputy Director at DEFRA, outlined that the UK REACH restrictions process involves: a 12-month Annex 15 dossier prepared by HSE; a six-month consultation; a three-month socioeconomic assessment followed by a two-month consultation; HSE’s final proposal submitted to Ministers; up to three months for a ministerial decision; secondary legislation; and an industry transition period, amounting to around four to five years from start to finish.

54 [Q260](#) [Dr Daniels]; [Q281](#) [Marc Casale]

55 [Q260](#)

56 In October 2025, the EU Commission adopted new measures restricting the use of PFAS in firefighting foams under the REACH Regulation, the EU’s chemicals legislation. The 2025 EU restriction states PFAS “shall not be placed on the market or used as of 23 October 2030 in firefighting foams in a concentration equal to or greater than 1 mg/L for the sum of all PFAS. (European Chemicals Agency)

57 [Regulation \(EC\) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals \(REACH\), establishing a European Chemicals Agency, amending Directive 1999 Sections 69–73](#)

58 Office for Environmental Protection ([PFAS0115](#))

59 Office for Environmental Protection ([PFAS0115](#))

60 [Q248](#)

61 Office for Environmental Protection ([PFAS0115](#))

such changes are implemented, the UK will trail behind the EU, hindering the introduction of swift restrictions for substances of concern based on emerging evidence.

32. A divergence in PFAS regulation between the UK and EU has direct implications for the UK because Northern Ireland continues to follow EU REACH.⁶² The Association of Manufacturers of Domestic Appliances stated that this increases compliance complexity and costs for businesses navigating different regimes across the UK.⁶³
33. We were also warned that this divergence risks the UK market retaining PFAS containing products that are already restricted in the EU. The Institute for European Environmental Policy said that this could lead to surplus PFAS products that cannot be sold on the EU market being “dumped on the UK market”.⁶⁴ This raises the possibility that these same products later become non-compliant in the UK and must be withdrawn or disposed of.⁶⁵
34. Marc Casale told us that in 2024, the UK’s chemicals sector exported £29 billion of goods, 62% of which went to the EU.⁶⁶ Divergence in PFAS regulation could therefore make it harder for UK firms to continue trading with the EU. The Chemical Business Association’s Autumn 2025 Budget Survey highlighted increasing regulatory divergence as accelerating the UK’s loss of competitiveness.⁶⁷

35. **CONCLUSION**

UK REACH, in its current lagging and slow-moving form, risks leaving the UK behind international best practice and limits the Government’s ability to respond swiftly to emerging scientific evidence on PFAS. This increases the likelihood of further regulatory divergence between Great Britain and Northern Ireland, creating trade barriers both ways, and detrimental consequences for UK goods in the EU market.

62 AMDEA, the Association of Manufacturers of Domestic Appliances ([PFAS0055](#)); ADS Group Ltd, *Multiple* ([PFAS0108](#)); Office for Environmental Protection ([PFAS0115](#)); CHEM Trust ([PFAS0031](#)); Fidra ([PFAS0025](#)); National Fire Chiefs Council (NFCC) ([PFAS0044](#)); Fuels Industry UK ([PFAS0046](#))

63 AMDEA, the Association of Manufacturers of Domestic Appliances ([PFAS0055](#))

64 Institute for European Environmental Policy UK (IEEP UK) ([PFAS0106](#))

65 Britannia Fire Ltd ([PFAS0013](#)); Institute for European Environmental Policy UK (IEEP UK) ([PFAS0106](#))

66 [Q282](#)

67 Chemical Business Association, [Chemical supply chain questions Government’s commitment to a domestic chemical sector](#), 26 January 2026; [Q282](#)[Marc Casale]

36.

RECOMMENDATION

The Government should make use of existing EU-UK dialogue mechanisms to support UK alignment with EU REACH to avoid unnecessary regulatory divergence. Whilst UK Government may choose a different approach in some areas, without such alignment, UK manufacturers risk accidentally being placed at a competitive disadvantage, and the UK public may face greater exposure to PFAS due to the absence of the more precautionary approach being pursued in the EU.

37.

CONCLUSION

UK REACH must be reformed to enable swifter restrictions on PFAS to ensure the UK can align with emerging evidence to act more quickly on substances of concern.

38.

RECOMMENDATION

The Government should reform UK REACH by March 2027 to avoid further delay in restricting PFAS. The Government should set targets at half the statutory maximum timescales and ensure that the Health and Safety Executive has the resources to meet these accelerated timelines.

Restricting PFAS

39. PFAS can be assessed for restriction either according to how they are used in products or processes, or according to their inherent chemical properties. In the UK, both approaches are already in use: the Government is consulting on restricting PFAS based on their application in firefighting foams⁶⁸ and has also restricted three PFAS under the Stockholm Convention because of their properties (Box 3).⁶⁹ This section discusses PFAS restrictions linked to specific uses, while the next section examines restrictions based on their properties.

68 Health and Safety Executive, [PFAS in firefighting foam \(FFF\) restriction proposal](#), 18 August 2025

69 Department for Environment, Food & Rural Affairs, [Persistent organic pollutants \(POPs\): policy information, 17 June 2025](#)

Box 3: The UN Stockholm Convention on Persistent Organic Pollutants

The UK implements bans on Persistent Organic Pollutants (POPs) through domestic legislation based on decisions taken under the UN Stockholm Convention, to which the UK is a signatory. These chemicals are recognised as posing serious global risks to human health and wildlife. The following PFAS have already been added to the Convention and subsequently prohibited in the UK:

- Perfluorooctanesulfonic acid (PFOS), 2009
- Perfluorooctanoic acid (PFOA), 2019⁷⁰
- Perfluorohexane sulfonic acid (PFHxS), 2022⁷¹

Source: [Stockholm Convention on Persistent Organic Pollutants \(POPs\)](#)

40. A study by Professor Cousins et al. suggested that banning all PFAS in one step would not be ‘practical or reasonable’, recognising the critical role of some PFAS where alternatives do not exist (e.g. medical applications and occupational protective clothing).⁷² The study proposed that PFAS uses which are not essential for health, safety or the functioning of society could be eliminated as a first step towards a global phase-out. The Madrid Statement, signed by more than 250 scientists from 38 countries, documented scientific consensus on PFAS and recommended that Governments internationally should “enact legislation to require only essential uses of PFAS”.⁷³ We have heard strong support for the restriction of PFAS in non-essential uses.⁷⁴

70 PFOS and PFOA are the most widely studied of the PFAS chemicals. They are comprised of eight carbon chains. (US Environmental Protection Agency, [Technical Fact Sheet – Perfluorooctane Sulfonate \(PFOS\) and Perfluorooctanoic Acid \(PFOA\)](#), 2017)

71 PFHxS is a long-chain PFAS but shorter than PFOA and PFOS. Despite its shorter carbon chain (six perfluorinated carbon atoms), PFHxS persists longer in the human body than PFOS or PFOA, and has been widely detected in blood serum, drinking water, and dust samples. (PFAS Water Experts, [PFHxS \(Perfluorohexane Sulfonic Acid\): Chemical Profile and Toxicity](#), (accessed 29 January 2026))

72 Cousins, Ian T., et al. “The concept of essential use for determining when uses of PFASs can be phased out.” *Environmental science: processes & impacts* 21.11 (2019): 1803–1815.

73 Green Science Policy Institute, [The Madrid Statement](#), 2014

74 [Q13](#) [Professor Depledge]; [Q168](#) [Professor Orsini]; [Q199](#) [Professor Sunderland]; Marine Conservation Society ([PFAS0042](#)); Lancaster University ([PFAS0095](#))

41. The Montreal Protocol, a multilateral environmental agreement, introduced the essential-use concept in 1992 and successfully phased out ozone-depleting substances except where their use was deemed essential.⁷⁵ Under this framework, a use is considered essential only if: (1) it is necessary for health, safety, or the functioning of society, and (2) no technically and economically feasible alternatives are available. These criteria have since been adopted by the EU in developing its own essential use concept for chemicals.⁷⁶
42. Using these criteria, Professor Cousins et al. set out three categories to be applied to PFAS (Box 4). They recommend that Category 1 “non-essential” uses can be eliminated through restrictions. Food packaging, cosmetics, cookware, school uniforms and other textiles have been proposed as examples within this category.⁷⁷ Professor Sunderland explained that, in some of these products, PFAS are added at the end of the production process and are therefore relatively easy to remove.⁷⁸

Box 4: Essential use framework

1. Non-essential: where PFAS is not critical to the product/service or the product/service is not sufficiently critical to justify the use of PFAS. These uses mainly exist due to market demand, not health, safety, or societal need.

2. Substitutable uses: where the product/service is critical, however, alternatives to PFAS can be used as a replacement to achieve the required properties, which makes those uses of PFAS no longer essential.

3. Essential uses: where PFAS that cannot be replaced with alternatives in a product/service without compromising health, safety or other critical functions.

Source: Cousins, Ian T., et al. “The concept of essential use for determining when uses of PFASs can be phased out.” *Environmental science: processes & impacts* 21.11 (2019): 1803–1815.

75 UN Environment Programme Ozone Secretariat, [Decision IV/25: Essential uses](#); UN Environment Programme Ozone Secretariat, [The Montreal Protocol on Substances that Deplete the Ozone Layer](#)

76 European Commission, [Questions and Answers on essential use chemicals](#), 22 April 2024; European Commission, [Guiding criteria and principles for the essential use concept in EU legislation dealing with chemicals](#), 22 April 2024

77 [Q199](#) [Professor Sunderland]; 2Encapsulate Ltd ([PFAS0034](#)); Lancaster University ([PFAS0095](#))

78 [Q199](#)

43. For Category 2 “substitutable” uses, Professor Sunderland told us that industry can often innovate and “there is a potential market for green alternatives” in these areas.⁷⁹ Professor Cousins et al. similarly noted that such alternatives may require greater promotion to support wider uptake and that costs are expected to fall as adoption increases.⁸⁰
44. Professor Sunderland emphasised that Category 3 “essential” uses are the most challenging to define. She noted that continued research and innovation to develop feasible substitutes could eventually shift such uses into the “substitutable” category.⁸¹ Linsey Cottrell, Environmental Policy Officer, Conflict and Environment Observatory, emphasised that essential-use exemptions still require careful evaluation.⁸² We heard evidence that highlighted the critical use of PFAS in medical devices, pharmaceuticals, protective equipment, semiconductors, netzero technologies, defence and manufacturing,⁸³ where developing alternatives can be technically difficult, costly and time-consuming.⁸⁴ Dr Nissanka Rajapakse, Group Head of Product Stewardship at Johnson Matthey, told us that they rely on PFAS in industrial equipment for manufacturing their hydrogen technologies and that PFAS remain critical to personal protective equipment for fire safety personnel responding to incidents on chemical plants.⁸⁵
45. In the PFAS Plan, the Government states that it will “consider consumer articles as part of any work to consider PFAS restrictions under UK REACH” but does not make a direct and definite commitment to this restriction. Dr Joanna Cloy, Senior Project Manager at Fidra, recommended that the UK should “follow in the footsteps of Denmark and France”, which have already begun prohibiting PFAS in certain consumer goods.⁸⁶ As Professor Sunderland advised, “start with the lowhanging things”, noting that early action in these areas “can be very effective and very fast”.⁸⁷

79 [Q199](#)

80 Cousins, Ian T., et al. “The concept of essential use for determining when uses of PFASs can be phased out.” *Environmental science: processes & impacts* 21.11 (2019): 1803–1815.

81 [Q199](#)

82 [Q30](#)

83 DuPont de Nemours, Inc ([PFAS0079](#)); AGC Chemicals Europe, Ltd. ([PFAS0059](#));

84 Parliamentary Office of Science and Technology, [Regulation and remediation of ‘forever’ chemicals](#), June 2025

85 [Q80](#)

86 [Q20](#)

87 [Q199](#)

46. RECOMMENDATION
The Government should adopt an essential-use approach to regulating PFAS, prioritising the rapid restriction of PFAS in non-essential applications. Clearly defined exemptions should be set for essential uses, with time-limited derogations where substitutes are still being developed.

47. RECOMMENDATION
The Government should commission the Health and Safety Executive under UK REACH to bring forward restrictions on PFAS in non-essential consumer products (e.g. food packaging, cookware and school uniforms) without delay and begin a phased restriction from 2027.

Grouping PFAS

- 48.** Having outlined how PFAS can be prioritised for restriction according to the essential-use framework, we also heard that their persistence, mobility and potential for harm mean PFAS must additionally be assessed on the basis of their chemical properties. There are three main approaches to assessing PFAS for restriction based on their properties: (1) individually assessing PFAS one by one; (2) categorising PFAS into sub-groups based on their structure; and (3) treating PFAS as a single group. Witnesses presented arguments for each.
- 49.** Regulating PFAS one by one is the approach reflected in existing bans under the Stockholm Convention (Box 3),⁸⁸ which has prohibited three PFAS that are recognised as posing serious global risks to human health and the environment.⁸⁹ Whilst the Stockholm Convention has successfully restricted the use of these three toxic PFAS, we heard that, in general, regulating PFAS one by one is impractical and too slow, given the thousands of substances within the class.⁹⁰ Professor Ian Cousins et al, warned that “it would be time and resource intensive to test and evaluate the more than 4,700 PFAS on the global market on a chemical-by-chemical basis”.⁹¹
- 50.** Several organisations, including Breast Cancer UK, and the Royal Society of Chemistry (RSC), argued that grouping PFAS with similar structures or hazards would accelerate restrictions and reduce risks to the public.⁹² This

88 Department for Environment, Food & Rural Affairs, [Persistent organic pollutants \(POPs\): policy information](#), 17 June 2025

89 [Stockholm Convention on Persistent Organic Pollutants \(POPs\)](#)

90 [Q114](#) [Stephanie Metzger]

91 Cousins, Ian T., et al. “Strategies for grouping per- and polyfluoroalkyl substances (PFAS) to protect human and environmental health.” *Environmental Science: Processes & Impacts* 22.7 (2020): 1444–1460.

92 Breast Cancer UK ([PFAS0017](#)); CHEM Trust ([PFAS0031](#))

approach is supported by other academics.⁹³ Stephanie Metzger, Policy Advisor on Sustainable Chemicals at the RSC, explained that PFAS can be categorised into sub-groups for assessment.⁹⁴ Professor Cousins et al. suggested that this could be by intrinsic properties such as persistence, bioaccumulation potential, toxicity, mobility, and molecular size.⁹⁵

51. Industries warned against considering PFAS as a single group, that all pose the same risks.⁹⁶ The Bathroom Manufacturers Association argued that restricting all PFAS together would be detrimental and called instead for a grouping approach that differentiates between PFAS types “based on intrinsic properties [and] toxicological profiles”.⁹⁷

Regrettable substitutions and safer alternatives

52. Stephanie Metzger suggested that a sub-grouping approach “to regulation is important to make sure we are not just jumping from one to another”.⁹⁸ This could lead to “regrettable substitutions” whereby, one substance is replaced by an equally or more harmful substance.⁹⁹ Stephanie Metzger pointed out that when PFOA was phased out,¹⁰⁰ some companies moved to other types of PFAS that also caused issues for human health and the environment, “via a slightly different biological mechanism”.¹⁰¹ Professor Sunderland likened this to “playing this game of chemical whack-a-mole”, where each new substitute remains unregulated and undetected for years until sufficient evidence emerges to justify restriction.¹⁰²
53. CHEM Trust and Professor Michael Depledge CBE highlighted that PFAS pose substantial financial and liability risks for industry, citing settlements in the United States and warning that similar claims are emerging in the UK as contamination becomes more widely identified.¹⁰³ ChemSec, a non-profit organisation focussed on reducing the use of hazardous chemicals, coordinates an investor-led initiative on hazardous chemicals, representing

93 Dr Elizabeth Chadwick (Senior Lecturer at Cardiff University); Dr Emily O’Rourke (Postdoctoral Research Associate at Cardiff University) ([PFAS0113](#)); [Letter to UK ministers PFAS letter from global academics to UK ministers](#), 2024

94 [Q114](#)

95 Cousins, Ian T., et al. “Strategies for grouping per- and polyfluoroalkyl substances (PFAS) to protect human and environmental health.” *Environmental Science: Processes & Impacts* 22.7 (2020): 1444–1460.

96 Stevenson Process Technology Ltd. ([PFAS0067](#)); Chemical Industries Association (CIA) ([PFAS0041](#))

97 Bathroom Manufacturers Association ([PFAS0028](#))

98 [Q143](#)

99 [Q168](#) [Professor Orsini]

100 Through the UN Stockholm Convention in 2019

101 [Q143](#)

102 [Q201](#)

103 [Q51](#) [Professor Depledge]; CHEM Trust ([PFAS0031](#)); Leigh Day ([PFAS0029](#))

more than 75 investors that urges companies to move away from persistent chemicals like PFAS and invest in the development of safer alternatives. This highlights the strong incentives for industry to invest in developing and introducing safer alternatives to market more rapidly. Johnson Matthey¹⁰⁴ have already committed to reducing the use of PFAS in operations and products and developing alternatives but acknowledged that it will take more time and more investment.¹⁰⁵

54.

CONCLUSION

Replacing one PFAS with another can perpetuate long-term environmental and health risks and can lead to regrettable substitutions, whereby banned substances are rapidly replaced by chemically similar and potentially harmful alternatives.

55.

CONCLUSION

Due to the impracticality of assessing thousands of PFAS one by one, and the risk that new substances emerge faster than they can be evaluated, the UK's current approach leaves regulators struggling to keep pace with industry innovation. While the burden of proof currently rests with Government before substances are banned, it is likely that without adopting a more ambitious approach the UK will continue to suffer significant PFAS contamination for many more decades.

56.

CONCLUSION

Without a broad, group-based restriction on PFAS, the Government risks a "whack-a-mole" approach.

57.

RECOMMENDATION

The Government should draw on independent scientific and regulatory expertise in taking a group-based approach for PFAS regulation within three months of the EU's forthcoming assessment. This should include assessing options for grouping PFAS with similar structures, so that future restrictions can be applied more swiftly, and effectively as new evidence emerges.

104 A British multinational speciality chemicals and sustainable technologies company

105 [Q58](#) [Nissanka Rajapakse]; Johnson Matthey, [Product stewardship](#)

58.

RECOMMENDATION

The Government should consult on the establishment of an industry-funded mechanism to rapidly assess the properties and risks of newly developed PFAS before they are permitted for use, and invest in the development of safer alternatives. This mechanism should prevent regrettable substitutions, incentivise safer alternatives and enable faster, more effective regulatory decisions, with proposals published within 12 months of the publication of this report.

3 Human exposure and risk management

59. This chapter examines the ongoing management of PFAS risks, including the associated health impacts, pathways through which people are exposed and how those exposures can be controlled through regulation and enforcement.

Health Impacts

60. Whilst the health impacts of low-level exposure to PFAS was contested, evidence to our inquiry pointed to a broad and increasingly well-evidenced range of health concerns associated with PFAS exposure, particularly in high exposure groups. This exposure can affect multiple organ systems, including immune suppression, certain cancers, fertility impacts, developmental delays and metabolic disorders, with witnesses emphasising the extreme persistence of PFAS and their accumulation over a lifetime.¹⁰⁶ Professor Sunderland, Fred Kavli Professor of Environmental Chemistry and Professor of Earth and Planetary Sciences at Harvard University, noted, “we see a large range of health impacts of these chemicals, with a much greater diversity than we have seen for other classes of compounds”.¹⁰⁷
61. However, evidence presented to the Committee also illustrated scientific debate on the matter. Professor Alan Boobis OBE, Professor of Toxicology at Imperial College London, told us that PFAS have a “questionable impact on human health”.¹⁰⁸ Professor Sunderland, however, directly disagreed with Professor Boobis and told us that there is “enough health information” to demonstrate that PFAS “are terrible for the communities that are highly exposed”.¹⁰⁹ Professor Martyn Kirk, Professor of Applied Epidemiology at Australian National University, explained that thousands of studies have examined PFAS and their impact on health, with some demonstrating strong evidence for certain health outcomes, while others report moderate or limited evidence.¹¹⁰ Experts agreed that data from cohorts with high exposure to PFAS justified concern and action.

106 [Q191](#) [Professor Sunderland] [Q8](#) [Professor Depledge].

107 [Q191](#)

108 [Q191](#)

109 [Q191](#)

110 [Q191](#)

62. Professor Kirk highlighted the challenge of studying PFAS exposure in the general population because PFAS are “found in the blood of most populations around the globe”, which complicates attempts to establish causal health links at typical exposure levels. Witnesses repeatedly called for greater investment in long-term epidemiological research. Professor Kirk said the strongest evidence comes from “highly exposed communities”, citing studies in Ronneby (Sweden),¹¹¹ Veneto (Italy),¹¹² and the C8 Science Panel study on communities in Mid-Ohio Valley (USA).¹¹³ Professor Depledge also supported more epidemiological studies and highlighted projects like the National Health and Nutrition Examination Survey in USA and Biobank, the EU biomonitoring programme as existing projects with a “huge amount of toxicological data”.¹¹⁴
63. Beyond clinical effects, PFAS contamination impacts mental health and community wellbeing. We heard during our visits to Bentham and France that communities living near suspected contaminated sites face considerable uncertainty and anxiety.¹¹⁵ As Professor Kirk observed, “the psychological impacts of living in these communities and the financial impacts are immense”.¹¹⁶

64. **CONCLUSION**

While gaps remain in understanding the toxicity of every individual PFAS, the evidence indicates that several PFAS are associated with a wide range of adverse health effects. Studies of highly exposed groups show clearer and more immediate risks, underscoring the need for precautionary action, given the extreme persistence and bioaccumulation of PFAS in the body, to protect the public.

111 The Swedish Supreme Court, [The Supreme Court delivers judgment in PFAS case](#), 2024

112 University of Padova Human Right Center, [PFAS Contamination Case in Veneto: Vicenza Court Delivers Historic Judgement in Pollution Trial](#), 27 June 2025

113 [C8 Science Panel](#), 2020

114 [Q47](#)

115 Annex 1

116 [Q196](#)

65.

RECOMMENDATION

The Government should invest in long-term research on the health effects of PFAS exposure in the UK population. Within 12 months, it should publish a delivery plan setting out epidemiological studies to assess the cumulative impact of multiple PFAS and the establishment of biomonitoring programmes for groups with higher exposure. For communities and occupations with known or suspected elevated PFAS exposure, the Government should also provide enhanced health screening, enabling early detection of health impacts, identification of trends, and reduced anxiety for affected individuals.

66.

CONCLUSION

The challenges of managing the risks of PFAS and associated health impacts are not issues faced by the UK alone. Many of the lessons relevant to the UK are already emerging from studies and regulatory processes across the European Union and beyond.

67.

RECOMMENDATION

The Government should draw on international best practice and collaborate with established PFAS research programmes to ensure that the UK is fully aligned with and contributing to this global evidence base. This will enable the Government to make evidence-based decisions more quickly and reduce the cost to the UK taxpayer. A synthesis report summarising the UK's international engagement, findings and planned actions should be published within six months of this Committee's report.

Human exposure pathways

68. According to the Institution for Mechanical Engineering, the pathways through which PFAS enter drinking water and the wider food chain are not well understood. Although public debate often focuses on PFAS in drinking water, which Dr David Megson, Reader in Chemistry and Environmental Forensics at Manchester Metropolitan University, indicated was because it is much easier to test PFAS in a water sample,¹¹⁷ evidence made clear that exposure occurs across multiple routes.¹¹⁸ People may be exposed to PFAS in different ways, for example:¹¹⁹

- Ingestion through drinking water

117 [Q206](#)

118 [Q1](#) [Professor Depledge]; [Q206](#) [Dr David Megson]

119 Parliamentary Office of Science and Technology, [Regulation and remediation of 'forever' chemicals](#), June 2025

- Ingestion through diet
- Inhaling from the air (and ingestion of dust)
- Absorption through skin contact

Diet has been identified as the main exposure pathway, other than for those exposed through their occupation.¹²⁰

Drinking water

- 69.** In March 2025, the Drinking Water Inspectorate (DWI)¹²¹ published updated guidance on PFAS in drinking water, that required water companies in England and Wales to monitor a wider range of PFAS and update their risk assessments accordingly.¹²² The DWI set a standard of 100 nanograms per litre for the sum of 48 specified PFAS. We heard calls for this guidance to be made statutory.¹²³ Therefore, we welcome the Government’s commitment, to convert the current DWI guidelines into statutory limits.¹²⁴

Food

- 70.** PFAS are present throughout daily life, from the lining of non-stick cookware to food packaging.¹²⁵ PFAS in food contact products like packaging and cookware, where PFAS are used for their ‘non-stick’ water and grease repellent properties, is considered a major source of human exposure.¹²⁶ A study conducted by environmental charity, Fidra, in 2020, found PFAS

120 Parliamentary Office of Science and Technology, [Regulation and remediation of ‘forever’ chemicals](#), June 2025

121 The body responsible for the regulation of drinking water quality in England and Wales

122 Drinking Water Inspectorate, [Guidance on the Water Supply \(Water Quality\) Regulations 2016 \(as amended\) for England and Water Supply \(Water Quality\) Regulations 2018 for Wales specific to PFAS \(per- and polyfluoroalkyl substances\) in drinking water](#), March 2025

123 The Drinking Water Inspectorate ([PFAS0130](#)); Royal Society of Chemistry, Position statement [PFAS in UK drinking water](#), June 2023; Health and Safety Executive, [Analysis of the most appropriate regulatory management options](#), March 2023

124 [Q292](#) [Emma Hardy]; Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

125 Kurwadkar, Sudarshan, et al. “Per-and polyfluoroalkyl substances in water and wastewater: A critical review of their global occurrence and distribution.” *Science of the Total Environment* 809 (2022): 151003; Institution of Mechanical Engineers ([PFAS0076](#)); Federation of Environmental Trade Associations Ltd ([PFAS0024](#)); The Open University ([PFAS0091](#))

126 E. M. Sunderland, X. C. Hu, C. Dassuncao, A. K. Tokranov, C. C. Wagner, and J. G. Allen, “A review of the pathways of human exposure to poly- and perfluoroalkyl substances (PFASs) and present understanding of health effects,” *Journal of Exposure Science & Environmental Epidemiology* 2018 29:2, vol. 29, no. 2, pp. 131–147, Nov. 2018.

in packaging from 8 out of 9 major UK supermarkets,¹²⁷ and in 100% of takeaways tested.¹²⁸ Fidra also reported that research has found PFAS in the coating cookware can begin to break down when heated to temperatures commonly reached during normal cooking and that PFAS may enter the body through micro- and nano-plastic particles shed from scratches on non-stick cookware.¹²⁹ Denmark was the first country to prohibit PFAS in food contact paper and cardboard materials in 2020.¹³⁰ Dr Cloy argued that following this example is necessary “to prevent irreversible contamination of the environment”.¹³¹

71. We have heard evidence that PFAS-free alternatives for food packaging are readily available,¹³² and some cookware brands are already selling products that are being marketed as PFAS-free, indicating the beginning of a market shift.¹³³ However, without clear labelling or regulation, consumers cannot reliably identify PFAS in products to make informed choices.
72. PFAS can enter the food chain through agricultural processes.¹³⁴ The Nature Friendly Farming Network (NFFN) told us that farmers are involuntary recipients of PFAS through inputs such pesticides (often unlabelled), unscreened organic materials, contaminated water sources, and, most significantly, sewage sludge.¹³⁵ When domestic wastewater is treated, the resulting sewage sludge or “biosolids”¹³⁶ can contain PFAS from household and industrial sources and is then applied to farmland as fertiliser.¹³⁷ Dr Joanna Cloy, Senior Project Manager at Fidra, explained that the application of biosolids on farmland can lead to the bioaccumulation of PFAS in the food that people are eating, and also in livestock.¹³⁸ She highlighted what she considered as the socio-economic divide to be “able to afford organic food produce” where biosolids or pesticides, which may contain PFAS, cannot be used.¹³⁹

127 Aldi, ASDA, Co-op, Iceland, Lidl, Morrisons, Marks and Spencer, Tesco, Sainsbury’s and Waitrose

128 Fidra, [PFAS in food packaging](#)

129 Fidra, [Non-Stick Cookware: A Sticky Situation?](#)

130 Ministry of Environment and Food of Denmark, Danish Veterinary and Food Administration, [Ban on fluorinated substances in paper and board food contact materials](#), June 2020; [Q20](#) [Dr Joanna Cloy]

131 [Q20](#)

132 [Q55](#) [Dr Joana Cloy]; [Q56](#) [Mark Hirlam]; [Q168](#) [Professor Orsini]

133 [HexClad Cookware UK](#); [Our Place](#)

134 Office for Environmental Protection ([PFAS0115](#)); Agricultural Industries Confederation (AIC) ([PFAS0085](#)); [Q52](#) [Dr Cloy]; [Q155](#) [Professor Orsini]

135 Nature Friendly Farming Network ([PFAS0132](#))

136 Solid organic matter recovered from a sewage treatment process that can be nutrient rich.

137 [Q52](#) [Dr Cloy]

138 [Q52](#)

139 [Q39](#)

73. The NFFN told us that farmers often do not know when biosolids contain PFAS and do not want to inherit PFAS contaminated sludge from water companies, stressing that this can contaminate the soils they work and grow food on.¹⁴⁰ Professor Michael Depledge CBE, Emeritus Professor at European Centre for Environment and Human Health, stressed that contaminated agricultural land should be a priority for regulation.¹⁴¹ We therefore welcome the Government’s decision as part of the PFAS Plan to consult on reforms on how biosolid use in agriculture is regulated.¹⁴²

Regulation

74. Despite progress in drinking water, Professor Luisa Orsini, Professor of Evolutionary Systems Biology and Environmental Omics at the University of Birmingham, and Co-founder and CEO of Daphne Water Solutions Limited, noted that “there is not enough regulation” beyond that. We heard evidence that regulation is fragmented, with inconsistent PFAS thresholds across different exposure pathways, making it unclear when regulatory action should be taken.¹⁴³ Dr Megson described the current regulatory framework as “scattered”, a “nightmare” for Government agencies, and pointed to inconsistency: “we go to water and we are looking for 48 PFAS. I go to food and I am looking for four PFAS”.¹⁴⁴ He suggested that this regulatory framework did not reflect the relative risks. He emphasised that “the chemical itself is not changing”, yet the assessed risk is constantly changing, depending on what is being sampled.¹⁴⁵ He argued that risk assessments for PFAS should be applied consistently across all exposure routes, including food and drinking water”.¹⁴⁶ Local Bentham residents told us during our visit that the absence of agreed safe thresholds makes it difficult to understand the potential risks to their health.¹⁴⁷
75. Given the cumulative impacts on human health and the environment, Wildlife and Countryside Link, a coalition of environmental and wildlife organisations, cautioned that treating different exposure routes or sources in isolation can lead regulators to underestimate the overall risk posed by PFAS and overstate the progress being made in reducing it.¹⁴⁸ The

140 Nature Friendly Farming Network ([PFAS0132](#))

141 [Q53](#)

142 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

143 Wildlife and Countryside Link, Angling Trust, Buglife, Fidra, Pesticide Action Network UK, The Pesticide Collaboration, Rivers Trust, RSPB, Surfers against Sewage ([PFAS0099](#))

144 [Q233](#)

145 [Q233](#)

146 [Q233](#)

147 Annex 1

148 Wildlife and Countryside Link, Angling Trust, Buglife, Fidra, Pesticide Action Network UK, The Pesticide Collaboration, Rivers Trust, RSPB, Surfers against Sewage ([PFAS0099](#))

Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) is conducting an independent review of PFAS chemicals and aims to set health-based guidance values to inform future risk assessments and regulatory decisions.¹⁴⁹ We welcome this programme of work, however, we heard warnings that waiting for full toxicological evaluation across thousands of PFAS could take decades, during which time population exposure would continue to grow. Dr Megson stated, “I do not want to wait 30 or 40 years to nail down the exact mechanism, but find out that in the process 30,000 people in the UK have died”.¹⁵⁰

76. CONCLUSION

Although the Government has begun setting statutory limits for PFAS in drinking water, which is a welcome step, significant gaps remain in managing and limiting human exposure to PFAS through food and agricultural pathways.

77. RECOMMENDATION

The Government should set limits on the levels and types of PFAS permitted in food, giving producers, retailers, and regulators a consistent basis for protecting public health. This should include establishing and monitoring limits on PFAS entering the food chain through agricultural processes. The Government should publish these limits within three months of the publication of the Committee on Toxicity’s review to draw on the expertise.

78. RECOMMENDATION

Whilst PFAS-containing consumer products remain on the market, the Government should introduce interim limits on PFAS levels and require standardised labelling to ensure consumers are fully informed. Implementation should be led by the Department for Environment, Food and Rural Affairs, working with the Food Standards Agency and the Office for Product Safety and Standards. This should take effect within six months and remain in place until PFAS are restricted in non-essential consumer goods.

149 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026

150 [Q224](#)

Monitoring and enforcement

- 79.** Professor Orsini told us that regulatory limits for PFAS have to be determined for the Environment Agency to be able to enforce them.¹⁵¹ Liz Parkes MBE, Deputy Director for Climate Change, Chemicals & Markets at the Environment Agency (EA), told us that, at present, “there is only one statutory environmental policy standard on water and one for biota”,¹⁵² a gap that affects both monitoring and remediation.¹⁵³ Without defined standards for monitoring, it is difficult for the EA to require remediation, restrict emissions or assess compliance. This uncertainty undermines the ambition contained in the PFAS Plan’s various monitoring commitments.¹⁵⁴
- 80.** We heard from the two manufacturers of PFAS in the UK, AGC Chemicals Europe, Ltd. and F2 Chemicals. Dr Andy Joel, Technical Support Chemist at F2 Chemicals, told us that the EA “does not quite know what it should be doing and we are not quite sure, therefore, what we should be doing”.¹⁵⁵ Stuart Ede, Head of Sustainability at AGC Chemicals, highlighted that they had “put voluntary measures in place to decide what we are going to put as our own limits” because regulatory expectations were unclear.¹⁵⁶
- 81.** Stephanie Metzger, Policy Advisor for Sustainable Chemicals at the Royal Society of Chemistry, told us that it is important that the Environment Agency are supported with the resources they need to regulate.¹⁵⁷ Duncan Sanders, Director for England at ATG Group, told us that from first-hand experience of remediating sites with the EA that there are “limited resources, there are limited staff”.¹⁵⁸ Stephanie said that the EA need to have the resources, skills and training to tackle these issues and pointed out that the EA is only looking at “four sites out of the 10,000 [PFAS] hotspots that it has identified”.¹⁵⁹
- 82.** These constraints are hindering regulatory action. According to Dr Joel, work at the F2 Chemicals site in Lancashire stalled because the EA asked them to wait “until it has decided what it wants to analyse”, meaning no land contamination assessment had yet taken place.¹⁶⁰ Capacity constraints

151 [Q153](#)

152 Biota is the flora and fauna of a region

153 [Q264](#)

154 Department for Environment, Food & Rural Affairs, [PFAS Plan: building a safer future together](#), 3 February 2026; [Q295](#)

155 [Q125](#)

156 [Q125](#)

157 [Q137](#)

158 [Q165](#)

159 [Q137](#)

160 [Q126](#)

are compounding the problem. Stuart Ede, AGC Chemicals Europe, Ltd., noted that only a small number of UK laboratories can undertake the analysis they need.¹⁶¹

83. CONCLUSION

Whilst the PFAS Plan sets out monitoring commitments, it lacks the specificity needed to inform and deliver action. Without clear requirements on what to monitor, the methods to use, and the thresholds for concern, and without adequate funding and laboratory capacity, the Environment Agency cannot enforce limits or identify risks in time to act.

84. RECOMMENDATION

The Government should provide full detail, in its response, on how its PFAS monitoring strategy will support enforcement and remediation. This should include a clear explanation of how monitoring results will be used to identify risks, guide remediation activity, and underpin regulatory enforcement.

85. RECOMMENDATION

The Government should accompany this with an assessment of the resources required for the Environment Agency to deliver their responsibilities outlined in the PFAS Plan and commit to providing the associated funding in its response.

161 [Q136](#)

4 Addressing pollution

- 86.** The continued use of PFAS has led to growing amounts of PFAS waste and environmental contamination. This chapter considers PFAS at end-of-life, how their disposal can be managed, how PFAS already in the environment can be remediated, and the challenges of destroying these chemicals given their persistence.

Supply chain and disposal

- 87.** Evidence highlighted a key challenge of identifying PFAS in the supply chain.¹⁶² Stephanie Metzger told us that “we need to have better information sharing through the supply chain about what ingredients and what chemicals are being used”.¹⁶³
- 88.** Dr Nissanka Rajapakse, Group Head of Product Stewardship at Johnson Matthey, explained that the “lack of supply transparency” is because there is “no requirement to communicate that up the supply chain”.¹⁶⁴ Professor Martyn Kirk highlighted that it is key to eradicate PFAS from the consumer supply chain” as much as possible to not use PFAS “unless absolutely necessary”.¹⁶⁵ However, the lack of transparency makes it difficult to identify PFAS in products to be removed.
- 89.** Dr Andy Joel, Technical Support Chemist at F2 Chemicals Ltd, argued that the responsibility is on the downstream user. Referring to PFAS in food packaging, he said that the problem lies not with the manufacturer of the PFAS but with “the manufacturer of the food wrapper”.¹⁶⁶ He highlighted that as part of UK REACH registration, the manufacturer advises their customers through safety data sheets on how their products should be handled.¹⁶⁷
- 90.** However, Stephanie Metzger argued that safety data sheets do not provide sufficient transparency. She pointed out that some substances, including PFAS, are not listed because currently there is no legislation or

162 Wildlife and Countryside Link, Angling Trust, Buglife, Fidra, Pesticide Action Network UK, The Pesticide Collaboration, Rivers Trust, RSPB, Surfers against Sewage ([PFAS0099](#)); National Association of Waste Disposal Officers (NAWDO) ([PFAS0114](#));

163 [Q131](#)

164 [Q80](#)

165 [Q195](#)

166 [Q129](#)

167 [Qq118-119](#)

guidance to require them to.¹⁶⁸ As a result, downstream users do not know if PFAS is in a product “because it is not written explicitly”.¹⁶⁹ She likened it to an ingredient list on a food label where not everything is listed. She emphasised that the issue is magnified as you “go down the supply chain” because if PFAS are present in a semi-finished or finished good, companies are not required to register them under UK REACH, and may not even be aware themselves.¹⁷⁰

91. Stephanie Metzger highlighted that transparency and awareness of the presence of PFAS is particularly important for downstream users to “make appropriate management decisions”.¹⁷¹ She explained that “at the moment, there are also no rules for what types of PFAS could end up in landfills, incineration plants or wastewater streams” and that without appropriate handling, PFAS “ends up just going right back into the environment”. This cycle of disposal and re-release perpetuates long-term contamination.
92. Landfills have been identified as long-term contamination risks, with PFAS detected in both leachate¹⁷² and landfill gas.¹⁷³ Professor Michael Depledge CBE, Emeritus Professor at the European Centre for Environment and Human Health, highlighted data mapping shows that that people living near industrial sites and landfill sites “are more likely to be exposed”.¹⁷⁴ Rising volumes of PFAS-containing waste will increase pressure on relevant communities and further embed contamination in soil and water systems.

93. **CONCLUSION**

Lack of supply chain transparency fundamentally undermines the UK’s ability to manage PFAS at end-of-life, leaving councils, waste operators and regulators unable to prevent products with PFAS entering landfill, and leading to further pollution of waterways, soil and the wider environment.

94. **RECOMMENDATION**

The Government should consult on mandatory PFAS disclosures across supply chains within six months, requiring manufacturers and importers to report the presence and purpose of PFAS in products placed on the UK market to support safe handling and disposal.

168 [Q119](#)

169 [Q119](#) [Stephanie Metzger]

170 [Q119](#)

171 [Q131](#)

172 Leachate is the liquid that drains or ‘leaches’ from a landfill

173 Landfill gas is a natural byproduct of the decomposition of organic material in landfills.

174 [Q38](#)

95. RECOMMENDATION

The Government must set out in its response a timeline to divert PFAS waste from landfill towards safer treatment or destruction technologies to manage increasing volumes of PFAS waste without causing further environmental contamination.

Remediation

- 96.** According to CHEM Trust, a charity focused on protecting humans and wildlife from harmful chemicals: “Even if all production and emissions of PFAS were stopped tomorrow, they would still persist in the environment for generations to come”.¹⁷⁵ Unlike many other chemical pollutants, PFAS resist breakdown and accumulate across soil, groundwater and sediment, making removal costly and technically demanding. This underlines the magnitude of the PFAS contamination issue the world faces. Due to the scale and complexity of the PFAS issue, witnesses emphasised that you cannot choose between prevention and remediation, “there has to be a balance between the two”.¹⁷⁶
- 97.** PFAS contamination presents a substantial and longterm financial burden. The Environment Agency estimated remediation costs for between 2,900 and 10,200 high-risk sites to be between £31 billion and £121 billion, as part of a PFAS Risk Screening project “to highlight the financial scale and burden” of the “PFAS problem across England”.¹⁷⁷ The EU recently published a report on *The cost of PFAS pollution for our society*,¹⁷⁸ which estimated that if the current levels of PFAS pollution in Europe continue until 2050 without regulatory action, the cost will reach approximately €440 billion (£384 billion) during that period. The report suggested that tackling such PFAS releases at the source by 2040 would save €110 billion (£96 billion).
- 98.** Marc Casale, Deputy Director for Chemicals and International at DEFRA, explained that PFAS contamination falls into two broad categories: legacy contamination, where the company originally responsible has since closed or no longer exists, and ongoing contamination, where current activities continue to release PFAS. He noted that in both cases the costs of cleaning up contamination can be substantial, particularly when no responsible business remains to meet those costs.¹⁷⁹ A major challenge in allocating liability for PFAS cleanup arises from the diffuse and historic nature of

175 CHEM Trust ([PFAS0031](#))

176 [Q184](#) [Professor Orsini]

177 Environment Agency, Jacobs, [PFAS – Evaluating the economic burden of remediating high-risk sites](#), PFAS Risk Screening Project - Phase 4 - Work Package 4 Economic Appraisal, July 2023

178 European Commission, [The cost of PFAS pollution for our society](#), January 2026

179 [Q295](#)

much contamination. PFAS have been used in thousands of products and processes over many decades, leaving a legacy of pollution from multiple sources. Without a clear mechanism to allocate liability in such cases, the burden falls on the taxpayer.

- 99.** We heard that the Government’s current approach places disproportionate costs on the public, rather than those who produced or used PFAS and emitted them into the environment. Stephanie Metzger and David Henderson, CEO at Water UK, highlighted that costs to remove PFAS from drinking water fall on water bill-payers.¹⁸⁰ During our roundtables as part of our visit to Bentham, local authorities told us that the cost of remediating contaminated land falls on the council if the liable business is no longer running or the business does not have the budget to address it.¹⁸¹
- 100.** The Royal Society of Chemistry (RSC) emphasised that the polluter pays principle, which must be considered as part of the Government’s EPPS in accordance with section 17 of the Environment Act 2021, should form the basis of any response to PFAS contamination. The RSC conducted a survey with YouGov on a representative sample of UK adults, to ask about their attitudes to PFAS.¹⁸² Stephanie Metzger told us that seventy-five per cent of respondents to the survey said that they would support a fee or a tax on PFAS manufacturing and upstream industries to help fund end-of-life management and environmental cleanup. She highlighted that “the public is on the same page [...] that the polluters should be responsible”.¹⁸³ David Henderson emphasised that the large costs involved with remediation “should not be borne by taxpayers; it should not be borne by water bill payers; it should be borne by those who have made a fortune out of making this stuff”.¹⁸⁴
- 101.** Other jurisdictions are moving more decisively. Witnesses pointed to the United States Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) ‘Superfund’ for contaminated land,¹⁸⁵ which deals with the release of hazardous substances, including two types of PFAS.¹⁸⁶ Stephanie Metzger explained that:¹⁸⁷

180 [Q131](#) [Stephanie Metzger]; [Q211](#) [David Henderson]

181 Annex 1

182 Royal Society of Chemistry, [Public perceptions of PFAS – what the UK thinks of forever chemicals](#), 2025

183 [Q131](#)

184 [Q229](#)

185 US Environmental Protection Agency, [Comprehensive Environmental Response, Compensation, and Liability Act \(CERCLA\) and Federal Facilities](#)

186 [Q131](#) [Stephanie Metzger]; [Q153](#) [Professor Orsini]; [Q188](#) [Professor Sunderland]

187 [Q131](#)

The CERCLA law gives the [US Environmental Protection Agency] the legal authority to find out who is liable for pollution on a site and hold them legally accountable for cleaning that up. Or, if they cannot find a legal liable party—for example, if a business has gone out of business because it is an old site—they are able to use the superfund trust to pay for that cleanup. That superfund is funded by a levy on the chemicals industry.

- 102.** In France, we met with a cross-party group of Parliamentarians and learnt about their proposed PFAS levies, whereby companies that are Installations Classified for the Protection of the Environment¹⁸⁸ will be subject to a €100 fee per 100 grams of PFAS discharged into water, with mandatory reporting for emissions exceeding 100 grams per year.¹⁸⁹ These examples demonstrate that polluter pays mechanisms can operate on a large scale and can ensure that costs do not disproportionately fall on the taxpayer. We also heard about ongoing local concerns when we visited Lyon, where around 200 residents have since filed a lawsuit seeking damages from nearby chemical plants in the area.¹⁹⁰
- 103.** We heard caveats relating to industry liability for PFAS contamination. Professor Luisa Orsini, Professor of Evolutionary Systems Biology and Environmental Omics at University of Birmingham, and Co-founder and CEO at Daphne Water Solutions Limited, told us that industry should be “co-responsible”. However, she highlighted that it is not illegal for industry to use or produce most PFAS in UK law.¹⁹¹ Vicky Robinson, Head of Sustainability at The Agricultural Industries Confederation, pointed out that society “have benefited from some of the benefits that the PFAS provide us”.¹⁹² Stuart Ede, Head of Sustainability at AGC Chemicals Europe, Ltd., suggested that when it came to liability, the Government needed to consider a “range of users” like manufactures, consumers and producers.¹⁹³
- 104.** The Minister told us that Part 2A of the Environmental Protection Act 1990, means that “those responsible for historical land contamination must pay for the remediation”.¹⁹⁴ She explained that where it not possible to

188 Facilities in France whose activities may pose risks or impacts, such as pollution of air, water or soil, or hazards including fire or explosion. Due to these potential effects on the environment, public health and safety, they are subject to specific regulatory controls. (French Government, [Installations classified for environmental protection \(ICPE\)](#), March 2026)

189 French Parliament, [Bill No. 2229](#)

190 Business and Human Rights Centre, [France: 200 local residents file lawsuit against Arkema and Daikin Chemical over massive releases of PFAS and their health and environmental impact](#), 3 February 2026

191 [Q153](#)

192 [Q229](#)

193 [Q130](#)

194 [Q280](#)

find the liable party “there is an £80 million fund that is available for local government to use”.¹⁹⁵ However, this is small in comparison to the estimated £31 billion to £121 billion cost of the issue.¹⁹⁶

105. Stephanie Metzger highlighted that the polluter pays principle is intended not only to ensure that polluters fund remediation but also to encourage industries to adopt safer practices and invest in pollution prevention measures.¹⁹⁷ On the basis of the evidence we have received, the Act does not appear sufficient to actively deter ongoing pollution. It does not include an emissions levy, contribute to the cost of removing PFAS from drinking water or detail the level of PFAS contamination to be a viable Part 2A site.^{198 199} We have also not heard any evidence of it being enforced.²⁰⁰

106. CONCLUSION

Remediating PFAS contamination in the environment is expensive and technically complex. The current regulatory approach that permits continued use of PFAS until harm is proven means that these substances can legally continue to accumulate in the environment, steadily increasing the long term environmental and financial burden.

107. CONCLUSION

The Government has not applied the polluter pays principle adequately to deter future PFAS emissions nor has it allocated sufficient government funding to tackle the remediation of PFAS in the environment where liable parties cannot be identified.

108. RECOMMENDATION

The Government should apply the polluter pays principle to prevent ongoing and historic PFAS contamination and consult by March 2027 on establishing a national PFAS Remediation Fund. The Government should:

- explore the implications of an emissions levy for PFAS on the UK REACH candidate list, to deter ongoing environmental contamination and hold polluters responsible;

195 [Q280](#), Department for Environment, Food and Rural Affairs ([PFAS0137](#))

196 Environment Agency, Jacobs, [PFAS – Evaluating the economic burden of remediating high-risk sites](#), PFAS Risk Screening Project - Phase 4 - Work Package 4 Economic Appraisal, July 2023

197 [Qq131-132](#)

198 National Contaminated Land Officers Group, Land Condition Community ([PFAS0084](#)); Water UK ([PFAS0120](#)); Affinity Water ([PFAS0021](#))

199 Department for Environment, Food and Rural Affairs, [Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance](#), April 2012

200 National Contaminated Land Officers Group, Land Condition Community ([PFAS0084](#)); Water UK ([PFAS0120](#)); Affinity Water ([PFAS0021](#))

- consider options for extending the polluter pays principle to products manufactured overseas and imported into the UK;
- ensure that when the Government extends the polluter pays principle that UK manufacturers are not at a disadvantage to overseas manufacturers of products;
- increase dedicated central government funding for local authorities to remediate where no responsible party can be identified; and
- ensure that the Remediation Fund and associated enforcement are overseen by the Environment Agency, and ensure that the Environment Agency has the necessary resources and skills required to implement any monitoring and enforcement responsibilities.

Remediation technologies

- 109.** We heard evidence on a range of technologies designed to remediate PFAS in the environment. Dr Schwarz, Chief Business Officer at Fluorok, told us that technologies often struggle to cross the “valleys of death” between proof-of-concept and commercial application.²⁰¹ He told us that government support in the form of research and scale-up grants are necessary to overcome this.²⁰² Witnesses warned that research and innovation alone will not be sufficient if the technologies are not ready at the point they are needed, highlighting the risk of delaying investment.²⁰³
- 110.** Dr Schwarz acknowledged that such grants would require a significant UK commitment and investment, but stressed the scale of the potential benefit, noting that “it is a big industry and there is big opportunity out there”.²⁰⁴ Dr Schwarz highlighted the Faraday Institution²⁰⁵ and the Advanced Propulsion Centre²⁰⁶ as examples of organisations that benefitted from Government investment into scientific research through UK Research and Innovation²⁰⁷ and Innovate UK.²⁰⁸ He noted that this funding successfully supported the development and scaling-up of new technologies, with businesses

201 [Q179](#)

202 [Qq179–180](#)

203 [Q184](#) [Professor Orsini]

204 [Q180](#)

205 The Faraday Institution, [Powering Britain’s Battery Revolution](#)

206 [Advanced Propulsion Centre UK](#)

207 [UK Research and Innovation](#)

208 UKRI, [Innovate UK](#)

now operating as a result of that backing.²⁰⁹ He suggested that applying a similar model to PFAS remediation could accelerate UK capability and create significant innovation opportunities.²¹⁰

111. Professor Orsini told us that most remediation technologies “just capture and concentrate PFAS”, meaning they simply “move the problem somewhere else” rather than eliminate it.²¹¹ She emphasised that while destruction techniques are more effective, they are “very energy-intensive” and difficult to scale”.²¹² She also highlighted emerging naturebased solutions, which similarly “capture and concentrate” PFAS but with a lower carbon footprint.²¹³ Professor Orsini suggested that the most effective long-term strategy may be a hybrid model, “a nature-based solution combined with modern technology that can destroy whatever has been concentrated without creating further waste”.²¹⁴
112. We saw the challenges of remediating and disposing PFAS first-hand, during our visit to Bentham. The manufacturer we visited was storing PFAS-contaminated stormwater in vast quantities in containers on site, awaiting treatment approval for remediation technologies, to prevent runoff carrying contamination beyond the site during rainfall. Without proactive planning, the UK risks a growing backlog of PFAS waste stored in warehouses or interim facilities, awaiting remediation and destruction.

113. **CONCLUSION**

Existing PFAS contamination in the environment must be addressed alongside prevention. Even with strong restrictions on future PFAS use, the UK already faces significant legacy contamination. Without action now, this legacy burden will pose long-term risks to public health and the environment, and mounting costs will continue to fall on government (and taxpayers) and water companies (and water bill payers).

114. **CONCLUSION**

Industry urgently needs clear direction and Government approval on viable remediation methods so that contaminated materials can be treated safely and at scale.

209 UKRI, [Faraday Battery Challenge](#)

210 [Q180](#)

211 [Q155](#)

212 [Q155](#)

213 [Q155](#); Blue Earth Biochar Limited ([PFAS0057](#))

214 [Q155](#)

115. RECOMMENDATION
The Government should support the development and deployment of scalable, cost-effective PFAS remediation technologies by directing investment through UK Research and Innovation into research, innovation and practical support.

116. RECOMMENDATION
The Government must publish formally approved guidance for PFAS remediation to provide businesses, local authorities and regulators with the certainty needed to deliver timely, safe and effective remediation.

Destroying PFAS

- 117.** As Professor Orsini explained, existing remediation technologies can remove PFAS from a medium but do not necessarily destroy them, meaning the captured PFAS must still be destroyed.²¹⁵ Evidence to our inquiry makes clear that the UK’s current capacity to destroy PFAS is both limited and heavily dependent on a single method: high-temperature incineration.²¹⁶ The Minister confirmed that this remains the only proven method available at the scale required.²¹⁷ While effective when operated at a high enough temperature (1,100°C) and with sufficient residence time,²¹⁸ David Henderson warned that inadequate combustion conditions can lead to “higher risks that the PFAS can break into smaller chains and disperse into the atmosphere”.²¹⁹
- 118.** The Minister told us that “that there are only two hazardous waste incinerators permitted to accept PFAS”, which is judged as “sufficient capacity to meet needs”.²²⁰ She noted that expanding incineration capacity may face opposition locally.
- 119.** While the Government said capacity is sufficient, we heard evidence from the firefighting appliance industry that the “quantities of PFAS containing materials that require disposal are increasing and it is essential that the UK has the infrastructure and technology to handle them”.²²¹

215 [Q155](#)

216 [Q177](#) [Dr Schwarz]; [Q216](#) [David Henderson]

217 [Qq299-302](#)

218 The duration time a substance remains in a system

219 [Q216](#)

220 [Q302](#)

221 Britannia Fire Ltd ([PFAS0013](#))

- 120.** Andy Spence from Britannia Fire Ltd highlighted the backlog of PFAS waste derived from portable firefighting appliances: “there are over 10,000 tonnes waiting to be disposed of, so there is a backlog already—this is prior to any ban that comes into action”.²²² Given that Dr Richard Daniels, Divisional Director of Chemicals Regulation Division at Health and Safety Executive, told us that the UK’s ban on PFAS was “one or two years behind” the EU, and concerns we heard about products containing PFAS being dumped on the UK market during time periods of diverging restrictions between the EU and UK, this is highly concerning.²²³
- 121.** We were also told that costs have risen dramatically. While disposal previously costed £0.52 per litre, Britannia Fire Ltd is now being quoted £2.80 per litre, £16.80 per extinguisher, which is costing the company thousands of pounds. This highlighted the growing cost of managing PFAS waste.
- 122.** The Minister acknowledged that greater demand for destruction is “anticipated” and said that it is important to look at emerging innovations and new destruction technologies. However, the Government does not yet have any plans for evaluating existing and future volumes of waste and ensuring destruction capacity keeps pace.

123. CONCLUSION

PFAS contamination cannot be addressed without reliable destruction capacity. Current UK incineration capacity is insufficient to treat the increasing volume of PFAS containing waste diverted from landfill, and significant gaps remain in the availability, scalability, and verification of other destruction technologies.

124. RECOMMENDATION

The Government should assess the volume of PFAS containing waste expected from forthcoming restrictions and determine whether UK high-temperature incineration capacity is sufficient. The Government should write to the Committee with its findings and proposed actions within six months.

125. RECOMMENDATION

The Government must commit, within six months, to funding the research and development of non-incineration PFAS destruction technologies through UK Research and Innovation and Innovate UK.

222 [Q70](#)

223 [Q260](#); Institute for European Environmental Policy UK (IEEP UK) ([PFAS0106](#))

Conclusions and recommendations

Preventing PFAS at the source

1. PFAS are highly persistent, bioaccumulative chemicals with the potential for long-term environmental and human harm, despite ongoing scientific uncertainties around the toxicity of different PFAS. (Conclusion, Paragraph 22)
2. The Government's PFAS Plan disproportionately focuses on expanding PFAS monitoring rather than preventing or remediating contamination. Applying the Government's own environmental principles demands decisive action now to limit further release and exposure. (Conclusion, Paragraph 23)
3. Voluntary action on PFAS and self-regulation by industry are not sufficient to ensure transparency, accountability or reduce PFAS emissions. (Conclusion, Paragraph 24)
4. The Government must act in line with the environmental principles, taking preventative and precautionary action to reduce cumulative PFAS exposure to both people and the environment. We expect the Government to set out in its response how its approach to PFAS has been developed with due regard to precautionary principle within the environmental principles policy statement. (Recommendation, Paragraph 25)
5. UK REACH, in its current lagging and slow-moving form, risks leaving the UK behind international best practice and limits the Government's ability to respond swiftly to emerging scientific evidence on PFAS. This increases the likelihood of further regulatory divergence between Great Britain and Northern Ireland, creating trade barriers both ways, and detrimental consequences for UK goods in the EU market. (Conclusion, Paragraph 35)
6. The Government should make use of existing EU-UK dialogue mechanisms to support UK alignment with EU REACH to avoid unnecessary regulatory divergence. Whilst UK Government may choose a different approach in some areas, without such alignment, UK manufacturers risk accidentally being placed at a competitive disadvantage, and the UK public may face greater exposure to PFAS due to the absence of the more precautionary approach being pursued in the EU. (Recommendation, Paragraph 36)

7. UK REACH must be reformed to enable swifter restrictions on PFAS to ensure the UK can align with emerging evidence to act more quickly on substances of concern. (Conclusion, Paragraph 37)
8. The Government should reform UK REACH by March 2027 to avoid further delay in restricting PFAS. The Government should set targets at half the statutory maximum timescales and ensure that the Health and Safety Executive has the resources to meet these accelerated timelines. (Recommendation, Paragraph 38)
9. The Government should adopt an essential-use approach to regulating PFAS, prioritising the rapid restriction of PFAS in non-essential applications. Clearly defined exemptions should be set for essential uses, with time-limited derogations where substitutes are still being developed. (Recommendation, Paragraph 46)
10. The Government should commission the Health and Safety Executive under UK REACH to bring forward restrictions on PFAS in non-essential consumer products (e.g. food packaging, cookware and school uniforms) without delay and begin a phased restriction from 2027. (Recommendation, Paragraph 47)
11. Replacing one PFAS with another can perpetuate long-term environmental and health risks and can lead to regrettable substitutions, whereby banned substances are rapidly replaced by chemically similar and potentially harmful alternatives. (Conclusion, Paragraph 54)
12. Due to the impracticality of assessing thousands of PFAS one by one, and the risk that new substances emerge faster than they can be evaluated, the UK's current approach leaves regulators struggling to keep pace with industry innovation. While the burden of proof currently rests with Government before substances are banned, it is likely that without adopting a more ambitious approach the UK will continue to suffer significant PFAS contamination for many more decades. (Conclusion, Paragraph 55)
13. Without a broad, group-based restriction on PFAS, the Government risks a "whack-a-mole" approach. (Conclusion, Paragraph 56)
14. The Government should draw on independent scientific and regulatory expertise in taking a group-based approach for PFAS regulation within three months of the EU's forthcoming assessment. This should include assessing options for grouping PFAS with similar structures, so that future restrictions can be applied more swiftly, and effectively as new evidence emerges. (Recommendation, Paragraph 57)
15. The Government should consult on the establishment of an industry-funded mechanism to rapidly assess the properties and risks of newly developed PFAS before they are permitted for use, and invest in the development of

safer alternatives. This mechanism should prevent regrettable substitutions, incentivise safer alternatives and enable faster, more effective regulatory decisions, with proposals published within 12 months of the publication of this report. (Recommendation, Paragraph 58)

Human exposure and risk management

16. While gaps remain in understanding the toxicity of every individual PFAS, the evidence indicates that several PFAS are associated with a wide range of adverse health effects. Studies of highly exposed groups show clearer and more immediate risks, underscoring the need for precautionary action, given the extreme persistence and bioaccumulation of PFAS in the body, to protect the public. (Conclusion, Paragraph 64)
17. The Government should invest in long-term research on the health effects of PFAS exposure in the UK population. Within 12 months, it should publish a delivery plan setting out epidemiological studies to assess the cumulative impact of multiple PFAS and the establishment of biomonitoring programmes for groups with higher exposure. For communities and occupations with known or suspected elevated PFAS exposure, the Government should also provide enhanced health screening, enabling early detection of health impacts, identification of trends, and reduced anxiety for affected individuals. (Recommendation, Paragraph 65)
18. The challenges of managing the risks of PFAS and associated health impacts are not issues faced by the UK alone. Many of the lessons relevant to the UK are already emerging from studies and regulatory processes across the European Union and beyond. (Conclusion, Paragraph 66)
19. The Government should draw on international best practice and collaborate with established PFAS research programmes to ensure that the UK is fully aligned with and contributing to this global evidence base. This will enable the Government to make evidence-based decisions more quickly and reduce the cost to the UK taxpayer. A synthesis report summarising the UK's international engagement, findings and planned actions should be published within six months of this Committee's report. (Recommendation, Paragraph 67)
20. Although the Government has begun setting statutory limits for PFAS in drinking water, which is a welcome step, significant gaps remain in managing and limiting human exposure to PFAS through food and agricultural pathways. (Conclusion, Paragraph 76)
21. The Government should set limits on the levels and types of PFAS permitted in food, giving producers, retailers, and regulators a consistent basis for protecting public health. This should include establishing and monitoring

limits on PFAS entering the food chain through agricultural processes. The Government should publish these limits within three months of the publication of the Committee on Toxicity's review to draw on the expertise. (Recommendation, Paragraph 77)

- 22.** Whilst PFAS-containing consumer products remain on the market, the Government should introduce interim limits on PFAS levels and require standardised labelling to ensure consumers are fully informed. Implementation should be led by the Department for Environment, Food and Rural Affairs, working with the Food Standards Agency and the Office for Product Safety and Standards. This should take effect within six months and remain in place until PFAS are restricted in non-essential consumer goods. (Recommendation, Paragraph 78)
- 23.** Whilst the PFAS Plan sets out monitoring commitments, it lacks the specificity needed to inform and deliver action. Without clear requirements on what to monitor, the methods to use, and the thresholds for concern, and without adequate funding and laboratory capacity, the Environment Agency cannot enforce limits or identify risks in time to act. (Conclusion, Paragraph 83)
- 24.** The Government should provide full detail, in its response, on how its PFAS monitoring strategy will support enforcement and remediation. This should include a clear explanation of how monitoring results will be used to identify risks, guide remediation activity, and underpin regulatory enforcement. (Recommendation, Paragraph 84)
- 25.** The Government should accompany this with an assessment of the resources required for the Environment Agency to deliver their responsibilities outlined in the PFAS Plan and commit to providing the associated funding in its response. (Recommendation, Paragraph 85)

Addressing pollution

- 26.** Lack of supply chain transparency fundamentally undermines the UK's ability to manage PFAS at end-of-life, leaving councils, waste operators and regulators unable to prevent products with PFAS entering landfill, and leading to further pollution of waterways, soil and the wider environment. (Conclusion, Paragraph 93)
- 27.** The Government should consult on mandatory PFAS disclosures across supply chains within six months, requiring manufacturers and importers to report the presence and purpose of PFAS in products placed on the UK market to support safe handling and disposal. (Recommendation, Paragraph 94)

- 28.** The Government must set out in its response a timeline to divert PFAS waste from landfill towards safer treatment or destruction technologies to manage increasing volumes of PFAS waste without causing further environmental contamination. (Recommendation, Paragraph 95)
- 29.** Remediating PFAS contamination in the environment is expensive and technically complex. The current regulatory approach that permits continued use of PFAS until harm is proven means that these substances can legally continue to accumulate in the environment, steadily increasing the long term environmental and financial burden. (Conclusion, Paragraph 106)
- 30.** The Government has not applied the polluter pays principle adequately to deter future PFAS emissions nor has it allocated sufficient government funding to tackle the remediation of PFAS in the environment where liable parties cannot be identified. (Conclusion, Paragraph 107)
- 31.** The Government should apply the polluter pays principle to prevent ongoing and historic PFAS contamination and consult by March 2027 on establishing a national PFAS Remediation Fund. The Government should:
- explore the implications of an emissions levy for PFAS on the UK REACH candidate list, to deter ongoing environmental contamination and hold polluters responsible;
 - consider options for extending the polluter pays principle to products manufactured overseas and imported into the UK;
 - ensure that when the Government extends the polluter pays principle that UK manufacturers are not at a disadvantage to overseas manufacturers of products;
 - increase dedicated central government funding for local authorities to remediate where no responsible party can be identified; and
 - ensure that the Remediation Fund and associated enforcement are overseen by the Environment Agency, and ensure that the Environment Agency has the necessary resources and skills required to implement any monitoring and enforcement responsibilities. (Recommendation, Paragraph 108)
- 32.** Existing PFAS contamination in the environment must be addressed alongside prevention. Even with strong restrictions on future PFAS use, the UK already faces significant legacy contamination. Without action now, this legacy burden will pose long-term risks to public health and the environment, and mounting costs will continue to fall on government (and taxpayers) and water companies (and water bill payers). (Conclusion, Paragraph 113)

- 33.** Industry urgently needs clear direction and Government approval on viable remediation methods so that contaminated materials can be treated safely and at scale. (Conclusion, Paragraph 114)
- 34.** The Government should support the development and deployment of scalable, cost-effective PFAS remediation technologies by directing investment through UK Research and Innovation into research, innovation and practical support. (Recommendation, Paragraph 115)
- 35.** The Government must publish formally approved guidance for PFAS remediation to provide businesses, local authorities and regulators with the certainty needed to deliver timely, safe and effective remediation. (Recommendation, Paragraph 116)
- 36.** PFAS contamination cannot be addressed without reliable destruction capacity. Current UK incineration capacity is insufficient to treat the increasing volume of PFAS containing waste diverted from landfill, and significant gaps remain in the availability, scalability, and verification of other destruction technologies. (Conclusion, Paragraph 123)
- 37.** The Government should assess the volume of PFAS containing waste expected from forthcoming restrictions and determine whether UK high-temperature incineration capacity is sufficient. The Government should write to the Committee with its findings and proposed actions within six months. (Recommendation, Paragraph 124)
- 38.** The Government must commit, within six months, to funding the research and development of non-incineration PFAS destruction technologies through UK Research and Innovation and Innovate UK. (Recommendation, Paragraph 125)

Annex 1: Note of private informal meeting with Bentham stakeholders

1. On 15 January 2026, the Environmental Audit Committee visited Bentham, North Yorkshire and held three roundtables near Bentham as part of its inquiry on Addressing the risks from Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS). Bentham was chosen because it is the location of a site with a long history of firefighting foam production, where past operations have led to PFAS accumulating in soil and groundwater, prompting ongoing regulatory investigations into the extent of contamination and any potential wider environmental or public health risks.²²⁴
2. The roundtables brought together Bentham residents, local authorities, regulators, health researchers and environmental specialists to discuss the impacts of PFAS.
3. The following themes emerged during the discussion:
 - Potential health impacts and uncertainty about how PFAS exposure might affect people.
 - Possible exposure routes, including environmental, occupational and historic pathways.
 - Communication and public understanding and awareness
 - Monitoring and remediation, including roles, responsibilities and available capability.

Table 1: Bentham residents

Health concerns and possible exposure routes

- Two long-term residents reported serious health conditions, including cancer, and questioned whether these might be linked to PFAS exposure. Both had received PFAS blood tests showing high levels.
- One participant noted that their PFAS levels were higher than those of a relative who had worked at a PFAS using manufacturing site and that the relative who worked at the site had lower levels of PFAS in their blood and showed no comparable health effects.
- One participant suggested their exposure may have come from foraging local food and fishing in the nearby river. Another participant highlighted historic airborne pollution from burning at the former manufacturing site as a possible source.
- Participants suggested PFAS could be transferred through pollen and bees into local honey, which might act as a useful bioindicator. It was also proposed that local veterinary practices should be engaged, alongside GPs and other health providers, to track PFAS-related trends.

Challenges raising PFAS concerns in the community

- Participants noted that the local community was split between those who thought that there was a PFAS problem and those who did not.
- Many felt people were reluctant to discuss PFAS publicly, with support more often expressed privately.
- There was a perception amongst some residents that talking about PFAS was not good for the reputation of the community, which lay behind some of the reticence.

Next steps

- Participant said that not knowing the impact of PFAS was the worst aspect of the issue. The absence of agreed safe thresholds was highlighted as a major barrier to understanding risk to health.
- Participants noted significant barriers to obtaining testing, including limited UK capability and high personal costs for private testing (around £750 per test).

- They also suggested that PFAS testing should be consistent over time for individuals to track whether levels were decreasing and if steps being taken to reduce exposure to PFAS were effective.
- One participant called for more investment in PFAS testing as this would become an increasing issue across the UK suggesting it would reduce the costs of testing but also lead to jobs in the UK.

Table 2: Local authorities and regulators

Community engagement and transparency

- Participants described extensive efforts to communicate openly with residents. Public meetings were well attended and provided structured opportunities for discussion.
- A large open forum in June 2025 (around 120 attendees) provided a wide-ranging Q&A, with remaining questions answered and published online afterwards. Monthly updates continued through the town council meetings.
- Regulators praised the structured and transparent approach, noting that it helped reduce early anxiety.
- Although initial community anxiety was high, participants felt transparency from authorities and industry had helped reduce tensions, though interest followed media coverage.
- One participant highlighted that some residents expressed concern over impacts on house sales.
- The Local Authority maintains dedicated PFAS information pages to support transparency and provide updates.
- Participants emphasised the importance of careful risk messaging to avoid overstating or understating potential hazards.

Regulatory challenges

- Participants highlighted major difficulties in assessing PFAS risks because the Government has not set binding PFAS exposure standards. Environmental permitting decisions are constrained by the absence of defined limits. New scientific evidence is continually emerging, meaning standards may need regular revision.
- Reviews of industrial processes, including onsite treatment of contaminated water, must pass through multistage consultations and determinations. Without benchmark levels, participants said it is difficult to reassure the public or define what constitutes “safe.”
- Asbestos was used as a comparison, with a participant highlighting that a risk analysis exists for asbestos, but evidence on PFAS is emerging with a lot of conflicting considerations around the world. Therefore, it is hard to quantify the risk to the general population

Pathways

- One participant suggested that live testing carried out on industrial site indicated that some pollutants may become airborne, raising further questions about exposure routes.
- Participants discussed whether risk differed between those working at the site and those living nearby. The site has a history of multiple industrial uses, not only firefighting foam manufacturing, which may influence historical contamination patterns.
- One participant noted that early PFAS from earlier decades may persist in the environment reach people through food supplies. They stated that early messaging from UKHSA included advice such as “just wash your potatoes,” but questioned whether PFAS posed a greater risk in this area than elsewhere in the country. They asked what practical mitigations residents could take and highlighted how difficult it was to obtain clear guidance in the early stages of the issue.
- Participants described the work undertaken on private water supplies in the area. Long-term monitoring had not previously included PFAS, as earlier risk assessment criteria did not identify it as a parameter requiring routine testing.
- It was highlighted that since concerns about PFAS were raised, several rounds of PFAS testing have been carried out on private water supplies, with all results showing PFAS levels below detectable limits.
- Public drinking water for the wider community is sourced from outside the immediate area.
- One participant suggested that issues relate to localised shallow groundwater contamination rather than the deeper aquifers used for drinking water. They described the contamination as highly localised, with rainfall periodically mobilising contaminants, but emphasised that it has not spread more widely.

Remediation

- One participant raised the burden of remediating historic contamination could fall on local authorities, many of which lack the necessary budget calling for better crossgovernment coordination (health, environment, local government) and clear, evidence-based standards are needed.

- Participants also highlighted that current technology is not capable of eliminating PFAS entirely from wastewater treatment works (WWTW) discharges.
- As validation processes, risk assessment criteria, and regulatory frameworks for PFAS develop, more historic industrial sites may be identified as potentially contaminated.
- Where such sites are no longer operational, the remediation burden may again fall on local authorities, which do not have the budget to address such liabilities.

Table 3: Health and environment

Health data and epidemiological uncertainty

- Participants stated that PFAS health data in the UK remains limited. Some cancers appeared to cluster geographically, but more robust, populationlevel datasets are needed.
- One participant noted three particular cancers affecting the area and that these cancers tended to occur within Bentham, based on hospital data. Researchers are requesting all-England NHS data on cancers.
- Some suggested funding largescale epidemiological studies and a population-level PFAS screening programme focused on higherrisk groups to differentiate elevated levels of PFAS due to greater exposure and link to health consequences. One participant noted that not everyone has the same risk but there will be a higher risk for certain groups who will be more exposed.
- Participants noted the need to differentiate between background PFAS exposure and elevated exposure due to occupation or local industrial activity.
- One participant called for publicly available data that identifies polluted sites.

Exposure pathways

- A participant suggested airborne dispersal from industrial activity as a potential significant pathway, with possible spread over several kilometres.
- Additional concerns included PFAS entering sewers, foam entering public spaces, and contamination of aquifers. Contamination is emerging at fire-training centres, airports, military bases, industrial sites, and post-fire locations where large volumes of foam were used.
- Participants emphasised that environmental PFAS contamination persists across decades and requires long-term monitoring and land-use controls. They suggested that systematic identification, mapping, and public disclosure were considered essential for remediation prioritisation, environmental governance, informed planning decisions, and preventing exposure.

- One participant discussed occupational exposures and high-risk groups. Firefighters were highlighted as one of the highest-risk occupational groups for PFAS exposure, alongside workers in industrial settings, waste management, landfill, and recycling sectors.
- The participant suggested monitoring workplace-specific PFAS exposure pathways, including firefighting and other PFAS-exposed sectors, to strengthen risk assessments and protective measures. They recommend targeted occupational health surveillance and PFAS monitoring.

Regulation and standardised limits

- A key theme was the absence of a UK drinking water standard for PFAS.
- Concerns were raised about industry substituting banned PFAS varieties with chemically similar alternatives that evade regulation.
- One participant suggested shifting to a model where industry must prove PFAS chemicals are safe before use.
- The creation of multidisciplinary teams combining councils, regulators, researchers and industry was suggested. A regional model in the Northwest was proposed as a potential pilot for national expansion.

Monitoring, remediation and capacity issues

- Participants highlighted significant gaps in monitoring of surface water discharges and industrial practices.
- One participant suggested independent environmental consultants as potential auditors of industrial compliance.
- It was highlighted that PFAS disposal remains a major challenge for industry: high-temperature incineration is recommended but capacity in the UK is very limited.
- It was also noted by a participant that some PFAS-containing storage cylinders are reused for other chemicals, creating contamination risks.
- The high cost for remediating PFAS in the environment was highlighted, with participants reinforcing the importance of prevention, stronger regulatory controls, and long-term monitoring frameworks.

Formal Minutes

Wednesday 15 April 2026

Members present

Mr Toby Perkins, in the Chair

Jonathan Davies

Sojan Joseph

Martin Rhodes

Dr Roz Savage

Blake Stephenson

John Whitby

Sammy Wilson

Addressing the risks from Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)

Draft Report (*Addressing the risks from Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 125 read and agreed to.

Annexes and Summary agreed to.

Resolved, That the Report be the Ninth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Adjournment

Adjourned till Wednesday 22 April 2026 at 2.00 pm.

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the [inquiry publications page](#) of the Committee's website.

Wednesday 25 June 2025

Linsey Cottrell, Environmental Policy Officer, Conflict and Environment Observatory; **Dr Joanna Cloy**, Senior Project Manager, Fidra; **Professor Michael Depledge CBE**, Emeritus Professor, European Centre for Environment and Human Health

[Q1-55](#)

Andrew Spence, Joint Managing Director, Britannia Fire Ltd; **Dr Nissanka Rajapakse**, Group Head of Product Stewardship, Johnson Matthey; **Mark Hirlam**, Global Sales Director, Delipac

[Q56-100](#)

Wednesday 10 September 2025

Stuart Ede, Head of sustainability, AGC Chemicals Europe, Ltd.; **Dr Andy Joel**, Technical Support Chemist, F2 Chemicals Ltd; **Stephanie Metzger**, Policy Advisor - Sustainable Chemicals, Royal Society of Chemistry

[Q101-149](#)

Duncan Sanders, Director for England, ATG Group; **Professor Luisa Orsini**, Professor of Evolutionary Systems Biology and Environmental Omics, University of Birmingham, Co-founder and CEO, Daphne Water Solutions Limited; **Dr Andrew Schwarz**, Chief Business Officer, Fluorok

[Q150-185](#)

Wednesday 10 December 2025

Professor Elsie Sunderland, Fred Kavli Professor of Environmental Chemistry and Professor of Earth and Planetary Sciences, Harvard University; **Professor Martyn Kirk**, Professor of Applied Epidemiology, Australian National University; **Professor Alan Boobis OBE**, Professor of Toxicology, Imperial College London

[Q186-204](#)

David Henderson, CEO, Water UK; **Dr David Megson**, Reader in Chemistry and Environmental Forensics, Manchester Metropolitan University; **Vicky Robinson**, Head of Sustainability, The Agricultural Industries Confederation

[Q205-240](#)

Wednesday 4 February 2026

Liz Parkes MBE, Deputy Director for Climate Change, Chemicals & Markets, Environment Agency; **Matt Womersley**, Environment and Business Manager – Chemicals Regulatory Development, Environment Agency; **Richard Daniels**, Divisional Director of Chemicals Regulation Division, Health and Safety Executive [Q241-272](#)

Emma Hardy MP, Parliamentary Under-Secretary of State (Minister for Water and Flooding), Department for Environment, Food and Rural Affairs; **Marc Casale**, Deputy Director, Chemicals & International, Department for Environment, Food and Rural Affairs [Q273-311](#)

Published written evidence

The following written evidence was received and can be viewed on the [inquiry publications page](#) of the Committee's website.

PFAS numbers are generated by the evidence processing system and so may not be complete.

1	2Encapsulate Ltd	PFAS0034
2	ABPI (The Association of the British Pharmaceutical Industry)	PFAS0118
3	ADS Group Ltd	PFAS0108
4	AGC Chemicals Europe, Ltd.	PFAS0059
5	AMDEA, the Association of Manufacturers of Domestic Appliances	PFAS0055
6	ATG Group	PFAS0075
7	Affinity Water	PFAS0135
8	Affinity Water	PFAS0021
9	Agricultural Industries Confederation (AIC)	PFAS0085
10	Agricultural Industries Confederation (AIC)	PFAS0133
11	Amentum	PFAS0056
12	Angling Trust	PFAS0050
13	Association of British HealthTech Industries	PFAS0064
14	Association of Contact Lens Manufacturers (ACLM)	PFAS0071
15	Asthma + Lung UK	PFAS0023
16	AstraZeneca	PFAS0104
17	Asynt	PFAS0022
18	Augean	PFAS0045
19	BEAMA	PFAS0070
20	Bathroom Manufacturers Association	PFAS0028
21	Bioforcetech Corporation	PFAS0066
22	Blue Earth Biochar Limited	PFAS0057
23	Breast Cancer UK	PFAS0017

24	Britannia Fire Ltd	PFAS0013
25	British Valve and Actuator Association (BVAA)	PFAS0011
26	Bussemaker, Madeleine, (Associate Professor, University of Surrey)	PFAS0122
27	Chadwick, Dr Elizabeth (Senior Lecturer, Cardiff University); and O'Rourke, Dr Emily (Postdoctoral Research Associate, Cardiff University)	PFAS0113
28	CHEM Trust	PFAS0031
29	Chemical Industries Association (CIA)	PFAS0041
30	Chemviron Carbon Ltd	PFAS0111
31	Claire, Paul Le (None, Water Awareness Jersey)	PFAS0001
32	Cleaner Bentham Ltd	PFAS0088
33	Codling, Dr Garry (Senior Lecturer in Water Chemistry, Centre for Resilience in Environment Water and Waste (CREWW), Exeter University)	PFAS0002
34	Conflict and Environment Observatory	PFAS0116
35	Cowie Technology Group Limited	PFAS0065
36	CropLife UK	PFAS0110
37	Department for Environment Food and Rural Affairs	PFAS0043
38	Department for Environment, Food and Rural Affairs	PFAS0136
39	Department for Environment, Food and Rural Affairs	PFAS0137
40	DuPont de Nemours, Inc	PFAS0079
41	ENDS Report	PFAS0048
42	Enviro Sampling Solutions	PFAS0014
43	Environment Agency	PFAS0105
44	Environment Agency	PFAS0134
45	Environmental Investigation Agency	PFAS0109
46	Environmental Resources Management (ERM)	PFAS0126
47	European Association of Chemical Distributors (Fecc)	PFAS0032
48	European Sealing Association	PFAS0007
49	F2 Chemicals Ltd	PFAS0005
50	FEC Federation of the European Cookware, Cutlery and Houseware Industries	PFAS0019
51	Federation of Environmental Trade Associations Ltd	PFAS0024

52	Fidra	PFAS0128
53	Fidra	PFAS0025
54	Flete Field Lab	PFAS0074
55	Fluoropolymers Product Group (FPG) of Plastics Europe	PFAS0107
56	Food Packaging Forum Foundation	PFAS0080
57	Food Standards Agency	PFAS0038
58	Fuels Industry UK	PFAS0046
59	Gambica	PFAS0026
60	GINLEY, Dr Francesca (Specialist, Marine Conservation Society (MCS))	PFAS0129
61	Groupe SEB	PFAS0081
62	Heat Pump Association	PFAS0127
63	Hendry, Professor Sarah	PFAS0087
64	Hillingdon Green Party	PFAS0061
65	Hospital Optometrists Committee	PFAS0072
66	Institute for European Environmental Policy UK	PFAS0131
67	Institute for European Environmental Policy UK (IEEP UK)	PFAS0106
68	Institution of Mechanical Engineers	PFAS0076
69	International Pharmaceutical Aerosol Consortium	PFAS0078
70	JEMIMA (Japan Electric Measuring Instruments Manufacturers' Association); JAIMA (The Japan Analytical Instruments Manufacturers' Association); JFMDA (The Japan Federation of Medical Devices Associations); JIMA (The Japan Inspection Instruments Manufacturers' Association); JMIF (Japan Measuring Instruments Federation); NECA (Nippon Electric Control Equipment Industries Association); SEAJ (Semiconductor Equipment Association of Japan); and IGMA (Industrial Gas Detectors and Monitors Manufacturers Association)	PFAS0090
71	James Walker Sealing Products and Services Ltd	PFAS0039
72	Japan Business Council in Europe	PFAS0096
73	Japan Electronics and Information Technology Industries Association (JEITA)	PFAS0036
74	Junque, Dr (Postdoctoral Research Fellow, University of Birmingham)	PFAS0063
75	KIMO UK	PFAS0069

76	Lancaster University	PFAS0095
77	Leigh Day	PFAS0029
78	Metal Packaging Manufacturers Association	PFAS0051
79	Marine Conservation Society	PFAS0042
80	Megson, Dr David (Reader in chemistry and environmental forensics, Manchester Met University)	PFAS0003
81	National Association of Waste Disposal Officers (NAWDO)	PFAS0114
82	National Brownfield Institute (NBI) - University of Wolverhampton	PFAS0101
83	National Contaminated Land Officers Group; and Land Condition Community	PFAS0084
84	National Fire Chiefs Council (NFCC)	PFAS0044
85	National Institute for Health and Care Research (NIHR) Health Protection Research Unit (HPRU) in Chemical Threats and Hazards, University of Leicester	PFAS0035
86	National Measurement Laboratory at LGC	PFAS0049
87	National Oceanography Centre	PFAS0125
88	National Office of Animal Health	PFAS0030
89	Natural England	PFAS0119
90	Natural Resources Wales	PFAS0052
91	Nature Friendly Farming Network	PFAS0132
92	Notpla Limited	PFAS0020
93	Nuclear Industry Association	PFAS0058
94	Office for Environmental Protection	PFAS0115
95	Orbia Fluor & Energy Materials	PFAS0040
96	Orion Pharma	PFAS0008
97	Performance Fluoropolymer Partnership	PFAS0098
98	Pesticide Action Network UK	PFAS0047
99	Plastic Free Fields	PFAS0089
100	Puraffinity	PFAS0092
101	Puragen	PFAS0086
102	R B Radley & Co Ltd	PFAS0018
103	Royal Society of Chemistry	PFAS0112
104	Stevenson Process Technology Ltd.	PFAS0067

105	Stoli Catalysts Ltd	PFAS0006
106	techUK	PFAS0117
107	The Chemours Company	PFAS0100
108	The Drinking Water Inspectorate	PFAS0130
109	The Environmental Industries Association (EIA)	PFAS0121
110	The National Farmers' Union of England and Wales	PFAS0027
111	The Open University	PFAS0091
112	The Worshipful Company of Water Conservators	PFAS0062
113	Trimplants and the Blackdown Hills Eco Hub (Community Group)	PFAS0060
114	UK Centre for Ecology and Hydrology	PFAS0037
115	UK Health Security Agency	PFAS0054
116	Waller, Dr Alexander (Head of Science, St. Stephen's International School Khao Yai, Nakhon Ratchasima, Thailand.); and Iampongsai, Mr Naphasit (Year 11 student, St. Stephen's International School Khao Yai, Nakhon Ratchasima, Thailand.)	PFAS0094
117	Water UK	PFAS0120
118	Watershed Investigations	PFAS0073
119	Wildlife and Countryside Link; Angling Trust; Buglife; Fidra; Pesticide Action Network UK; The Pesticide Collaboration; Rivers Trust; RSPB; and Surfers against Sewage	PFAS0099
120	W. L. Gore & Associates (U.K.) Limited	PFAS0083
121	Yorkshire Water	PFAS0077

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the [publications page](#) of the Committee's website.

Session 2024–26

Number	Title	Reference
8th	The Seventh Carbon Budget	HC 1327
7th	Environment in Focus	HC 1310
6th	Environmental sustainability and housing growth	HC 439
5th	Airport expansion and climate and nature targets	HC 831
4th	Flood resilience in England	HC 550
3rd	The UK and the Antarctic environment	HC 499
2nd	Governing the marine environment	HC 551
1st	The role of natural capital in the UK's green economy	HC 501
8th Special	Environmental sustainability and housing growth: Government Response	HC 1785
7th Special	Airport expansion and climate and nature targets: Government Response	HC 1600
6th Special	Flood resilience in England: Government Response	HC 1591
5th Special	The UK and the Antarctic environment: Government Response	HC 1273
4th Special	Governing the marine environment: Government Response	HC 1272
3rd Special	The role of natural capital in the green economy: Government Response	HC 1242
2nd Special	Net zero and UK shipping: Government Response	HC 705
1st Special	Enabling sustainable electrification of the economy: Government Response	HC 564