Incorporated by Royal Charter 2005

WORSHIPFUL COMPANY OF WATER CONSERVATORS

Promoting a diverse and sustainable environment

THE PROBLEM OF PFAS IN THE WATER CYCLE

RESPONSE TO THE HSE CONSULTATION ON RESTRICTIONS OF PFAS IN FIREFIGHTING FOAMS

https://consultations.hse.gov.uk/crd-reach/pfas-in-firefighting-foam-fff-restriction-proposal/

AND IN RESPONSE TO THE DEFRA 2026 PFAS ACTION PLAN

https://defraenvironment.blog.gov.uk/2026/02/03/forever-chemicals-the-problem-and-our-plan/

https://www.gov.uk/government/publications/pfas-plan/pfas-plan-building-a-safer-future-together

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PROLOGUE

1 The Worshipful Company of Water Conservators ('WCWC') is a City of London Livery Company focussed on the long-term health of our water resources and the broader environment. Our members include senior professionals from water, environmental and related industries and regulators, along with others who share our concern for water and the environment. Our experience and knowledge ranges from the complexities of environmental sciences, through the application of engineering to deliver the goals identified by those sciences, and the subsequent management of the assets created. The WCWC's purpose is *promoting a diverse and sustainable environment.*

2 As part of that purpose, the WCWC has been responding to relevant consultations particularly on matters relating to water conservation. These are archived on its website.

3 The WCWC is very much aware of the impacts of PFAS on human health and the environment and that the water environment is a major vector of the spread of these substances. In fact, the Defra blog on the Plan features a photo of a river. It has, therefore, contributed to the ongoing dialogue; it contributed to the EAC Call for Evidence; it produced

a major Thinkpiece on bioresources, including the impact of PFAS on their uses and has produced an overview of its contributions in 2025.

https://waterconservators.org/wp-content/uploads/filr/4194/JAN-26-OVERVIEW-of-consultations-and-thinkpieces-in-2025.pdf

4 The overview contains a section dedicated to PFAS, which has specific hyperlinks to WCWC papers and relevant references and for ease of reference this is reproduced in Appendix 1. This included a reference to the HSE consultation on the proposed ban. It sets out the broad perspective and made some specific suggestions which are relevant to the Consultation and Action Plan. The summary stated that water companies face disproportionate criticism for a problem driven by product use. WCWC calls for:

- Faster restrictions
- National strategy integration
- Better modelling
- Polluter-pays enforcement

And elsewhere it calls for government to take a clearer leadership role in communicating the issues and in changing societal habits, as part of a wider point about the role of government itself in water management.

SUMMARY

5 The WCWC provides an overview of its work on PFAS as an appendix1.

6 It supports the proposed ban on the use of PFAS in fire- fighting foams.

7 The WCWC observes, once more that there is a complex web of initiatives which are not well connected. Clarity and simplicity are essential. the Action Plan must be part of English water strategy. The Action Plan provides a complex set of initiatives, but several are missing, for example, the plan to tackle zero chemical status of rivers.

8 Once more the practical regulatory steps seem to be focussed on water companies and what is needed is swifter regulatory action on use. Care must be exercised on the clarity of compliance with new criteria. The Plan must fit in with whatever emerges from the White Paper on the future of water; the WCWC makes some suggestions. The issue of PFAS is not considered in the White Paper. But the White Paper does propose a central water quality steering group in the new water regulator .The WCWC will make a number of suggestions for changes in the proposals in the White Paper including the creation of a central Common Standards Unit bring together the proposal for this steering group, the UKTAG and the Standing Committee of Analysts to provide a holistic and consistent approach to standards and monitoring. Appendix 2 sets out some of the questions which the WCWC will address in its response to the White Paper

9 One clear step which could be implemented quickly is consideration of how PFAS can be regulated by water companies in trade effluent consents and how the ‘polluter pays principle’ applies. Part of government intervention could be to prescribe PFAS in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991. This will have to be led by Defra.

WCWC COMMENTARY

10 This is based on the Overview

Faster restrictions

11 The WCWC is aware that the Action Plan has been criticised. It supports swift action, and hence supports the ban proposed by HSE:

https://www.theguardian.com/environment/2026/feb/03/environmentalists-decry-crushingly-disappointing-pfas-action-plan-for-uk

https://eandt.theiet.org/2026/02/03/uk-launches-pfas-forever-chemicals-plan-critics-warn-it-lacks-regulatory-action

National Strategy Integration

12 The WCWC has argued persistently that there is no overarching English Water Strategy and the Thinkpiece sets this out in details. The Action Plan was lunched just after the White Paper on a new vision for water in England was published in response to the Independent Commission on Water.

https://www.gov.uk/government/publications/a-new-vision-for-water-white-paper
https://assets.publishing.service.gov.uk/media/696f52c9011505255b2d41f1/Defra_Water_White_Paper_2026.pdf

13 A consultation on the use of sewage sludge in agriculture, was released just afterwards, which was promised in the Environmental Action Plan published in December 2025, which must feature the impact of PFAS.

https://www.gov.uk/government/consultations/regulatory-framework-reform-for-sludge-applied-to-agricultural-land

https://consult.defra.gov.uk/the-sewage-sludge-team/consultation-on-reform-of-the-regulatory-framework/

14 The EIP does not refer to a PFAS Action Plan and indeed the Action Plan does not refer to the EIP. The government cannot quite work out where the Plan sits .The Policy Paper is headed with a picture of a very pleasant river .But the Plan does not refer to the fact that PFAS are principal contributors to the zero chemical; status under the 2017 Water Directive Framework Regulations, and have been merged in with narratives about storm overflows to create stories about rivers with chemical cocktails. The blog features a family walking in green countryside; it is managed by Defra as the Nature Recovery Team under the headings of Environment blog / Chemicals and Pesticides / Environmental Improvement Plan with little if any direct connection to that Plan. The 2023 Plan for Water and the EA response did give a time frame for long term improvement embracing proposed changes in PFAS use and natural abatement for 2063 or thereabouts. This is now missing from the current Action Plan.

15 At the same time the Welsh Government published its different response to the Water Commission, incorporating its intentions on sewage sludge into this.

https://www.gov.wales/written-statement-consultation-green-paper-shaping-future-water-governance-wales

Green Paper: Shaping the Future of Water Governance in Wales | GOV.WALES

16 The WCWC will comment ono the English White Paper and respond to the Welsh Green Paper.

17 The Action Plan refers to the work on chemical analysis to help develop quality criteria. But is does not mention the work of the Standing Committee of Analysts responsible for 'Blue Book 'methods for the water sector (under the wing of the DWI).

https://standingcommitteeofanalysts.co.uk/

18 Nor of the UK Technical Advisory group responsible for water quality criteria under the Water Framework Directive.

https://wfduk.org/sites/default/files/Media/Environmental%20standards/Environmental%20standards%20for%20use%20in%20classification%20and%20POMs_Draft_010605.pdf

19 Nor that the White Paper is proposing that the proposed unified English Water Regulator will convene a water quality advisory group. Without going into the details of what the WCWC will say in relation to the White and Green Papers, it will be recommending that the Water Quality Advisory Group, UKTAG and the SCA should be brought together in a Common Standards Unit possibly under Defra and certainly involving the Welsh Government. And deal with resources criteria as well; this will create a more holistic and consistent approach on standards and monitoring across all sectors of the water cycle for substances like PFAS and others such as microplastics

20 The Plan has a lot of investigations and so on, but it is quite hard to deduce the 'wood from the trees. But there are plenty of actions the government could take to speed up the reduction in environmental loads. More hard actions are needed beyond more regulation of water companies.

Better Modelling

21 The WCWC urges Defra to be clear as advocated in the Overview.

Polluter pays

22 The question is, who is the polluter? Too much of the narrative particularly in sewage sludge portrays the water companies as the polluters. Dealing with PFAS within water service operations is going to be expensive with implications for water bills. Yet two of the 'hard actions' by Defra in the Plan is to introduce tougher criteria for drinking water and presumably it is anticipated for sewage sludges. Coupled together with the sterner stance of penalties for non-compliance as proposed at the end of 2025 means that this whole topic needs much closer examination.

23 Consideration needs to be given to how PFAS can be regulated by water companies in trade effluent consents and how the 'polluter pays principle' applies. Part of government intervention could be to prescribe PFAS in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991. This will have to be led by Defra.

Narrative

24 There needs to be a better government communications plan. In addition to explaining what is happening in a simpler narrative, it must include an explanation of what it is going to do.

25 Defra must decide on whether it is a narrative leader or follower. For example, the use of treated sewage sludge in agriculture has worked well for decades in a regulatory regime, supported by Government, which might need to be made more contemporary. But everyone recognises that our understanding of the role of PFAS (and microplastics) means that these

will have to be taken into account in any contemporising. Poor communications have allowed ill-informed press stories on sewage sludge to flourish.

Appendix1

PFAS Section of Overview of work in 2025

26 PFAS 'forever chemicals' pollution of rivers is transitory but that of soil is long term accumulation as explained in subsequent sections. They are critical in determining the status of controlled waters in catchments under the Water Framework Directive Regulations and river basins criteria; there was a great deal of discussion in 2025 on these topics with rising concerns. The WCWC expressed its views on this in previous years. The WCWC also responded to an EAC call for evidence, and in a Thinkpiece on bioresources, following some ill-informed press reports on the regulation and impact of biosolids in agriculture (and microplastics as well) provided some thoughts on PFAS. Text from these is used in this Overview to explain the problems and suggestions for ways forward.

https://waterconservators.org/wp-content/uploads/filr/3509/May-25-PFAS-Response-to-the-EAC-Call-for-Evidence.pdf

https://waterconservators.org/wp-content/uploads/filr/3820/Sept-25-BIORESOURCES-Thinkpiece.pdf

https://www.theoep.org.uk/sites/default/files/reports-files/Cover%20Letter%20and%20Written%20Evidence%20for%20EAC%20PFAS%20Inquiry.pdf

https://www.theoep.org.uk/sites/default/files/reports-files/Cover%20Letter%20and%20Written%20Evidence%20for%20EAC%20PFAS%20Inquiry.pdf

https://www.gov.uk/government/publications/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water

27 The WCWC did not offer any insight into the toxicology of these substances, it did recognise the concerns being expressed about their presence in the environment, and in particular, the consequences for human health. But in overall terms is concerned that the water companies and their regulators are taking the brunt of criticism for what are much wider societal problems. Sewage sludge on farms under scrutiny as poll backs water firm accountability – Farming UK News

28 The WCWC has before explained, and repeated in the response to the EAC, the focus on PFAS in 2023 Defra Plan for Water. This recognises that almost all of the failures of chemical status of controlled waters under the Water Directive Regulations of 2017 are caused by uBPT substances (ubiquitous, bioaccumulative, persistent, toxic) forever chemicals, mostly PFAS.

29 The EA response to the Plan gives some insight, where around 35-40 years may be needed to achieve resolution of the PFAS problem. Dealing with PFAS, other than PFOS and PFOA, and PBDE, may prove to more intractable. This assumed that bans on the use of these substances would be introduced by Government would be introduced. The length of time is necessary because PFAS are in the water environment as legacy contaminants being added now from legacy products, which can be used after manufacture and retail are banned, via wastewater streams arising from future uses, the more extensive and rapid the

bans of use, the less will arise. So, with better environmental data and forecasting of bans it should be possible to model a profile.

30 The media focussed on the issue during the year.

https://www.theguardian.com/environment/2025/jul/11/toxic-pfas-above-proposed-safety-limits-in-almost-all-english-waters-tested

31 The WCWC observed that media and political coverage can conflate issues; the zero chemical status issue was woven together with concerns about storm overflows from sewers to create images of rivers polluted with 'chemical cocktails' from sewage. There needs to be two formal metrics on chemical status of rivers with and without uBPTs. The WCWC has suggested this previously

32 The WCWC supported the initiative of the EAC Inquiry to look at regulatory systems. Once more, the approach to the problem, as in other environmental problems, is complex and often difficult to unravel. To facilitate the modelling, the WCWC asked...how do PFAS get into the water environment other than sewage effluent and what is their contribution to WFD chemical status failure? Action is needed at a national level led by Defra to answer this question.

33 Concerns were extended on drinking water:

https://www.dwi.gov.uk/pfas-and-forever-chemicals/

https://www.bbc.co.uk/news/articles/c9q1nzyzyjeo

34 The Drinking Water Inspectorate (DWI) issued updated guidance in March 2025 for water companies to monitor dozens of types, setting a guideline of 0.1 micrograms per litre (µg/L) for 48 specific PFAS, with action needed for levels exceeding 100 nanograms per litre (ng/L) in treated water, In the last four years, 1.7 million tests for individual forever chemicals have been carried out across the network. At least 9,432 of those recorded PFAS levels above the level which the DWI says could constitute a potential danger to human health, external. When a test result is above or likely to breach this level - set at 0.01ug/L - (micrograms per litre) the DWI issues enforcement notices to water companies requiring action to be taken to ensure water is safe.

https://www.dwi.gov.uk/what-we-do/annual-report/drinking-water-2024/drinking-water-2024-summary-of-the-chief-inspectors-report-for-drinking-water-in-england/perfluoroalkyl-and-polyfluoroalkyl-substances-pfas/

35 There were ill-informed press reports on bioresources partly driven by concerns over PFAS (and microplastics) in biosolids used in agriculture continuing to December 2025. These problems are somewhat different in that they are focussed on accumulation of these substances in soil, but the press reports are focussed on immediate toxicity in the biosolids themselves as well as long term accumulation. Sewage sludge on farms under scrutiny as poll backs water firm accountability – Farming UK News

36 The issue is not immediate toxicity of biosolids, but the unacceptable accumulation in soils arising from repeated applications over many years. The WCWC pointed out the difference between these long- term and the short-term issues. It cannot answer the question about risks, but the PFAS have been used for some time and so with the benefit of lowering contributions in future it must be possible to evaluate the impact of the past with reducing uses in the future, contrary to the current media narrative.

37 It would be very helpful if a modelled profile could be developed to predict how the quality of bioresources, for example, will change over the predicted 40-year period. The historic contamination in soil will persist, unlike water. Much more information is needed on the role of PFAS in soil with respect to biosolids use so that the appropriate quality criteria can be agreed. The WCWC suggested that the Standing committee of Analysts SCA produces standard methods.

38 Compliance with environmental goals, (including drinking water quality), will be achieved by significant investments, for the foreseeable future, by the Water Companies, to deal with legacy issues and the consequences of uses of PFAS exempted in future from any ban. The water sector is working actively on this, backed by Ofwat.

https://www.bbc.co.uk/news/articles/clydd630pxzo

39 If it is found that there are advantages in maintaining the uses of certain critical products for the wider community and that causes the need for expensive water and sewage treatment processes, there is a circularity in the argument that society benefits from those substances so it must pay to avoid consequences. This must be accepted in future Price Reviews by future economic regulators.

40 The WCWC supported the initiative of the EAC Inquiry to look at regulatory systems. Once more, the approach to the problem, as in other environmental problems, is complex and often difficult to unravel. Progress is slow. The OEP noted in its submission to the EAC that there was no specific commitment in the previous EIP to this issue. That omission continues in the current EIP.

https://www.theoep.org.uk/sites/default/files/reports-files/Cover%20Letter%20and%20Written%20Evidence%20for%20EAC%20PFAS%20Inquiry.pdf

41 As explained earlier the Government has a major role itself to help solve the problem. They are included in the programmes of REACH.

https://www.fieldfisher.com/en/insights/pfas-uk-regulatory-snapshot.

42 The uses of PFOS and PFOA (also a PFAS) have been heavily restricted for some time and were banned as from July 2025 for use in firefighting foams. The WCWC supported the initiative by Defra/HSE to extend the ban on the use of all PFAS in firefighting foam, as referred to above, but would prefer the consultation period on this to be swifter and to extend to other uses.

https://consultations.hse.gov.uk/crd-reach/pfas-in-firefighting-foam-fff-restriction-proposal/

43 The WCWC urged close co-operation by the UK with the EU on regulation and research, not only to benefit from a wider effort but also to recognise the implications for future trading. Thus, it supported as much effort as possible into coordinated research to provide the evidence for action. It also supported the initiative for a Europe wide ban certainly on the production and uses of non-critical PFAS as a minimum. The WCWC has noted progress in France, for example, with a ban on ‘forever chemicals' in cosmetics and clothes to enter into force.

44 There needs to be an urgent update of the 2023 Water Plan, but this was not addressed by the 2025 EIP. The WCWC advocated an overarching water use strategy, to embrace a PFAS action plan, where progress should be reported annually. The WCWC suggested a distinct approach for bioresources in the Thinkpiece which must be included.

45 Consideration needs to be given to how PFAS can be regulated by water companies in trade effluent consents and how the ‘polluter pays principle’ applies. Part of government intervention could be to prescribe PFAS in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991. This will have to be led by Defra

Appendix 2 .

Some questions on PFAS for the WCWC response to the White Paper on the future of water management

1. What are the feasibility, effectiveness and costs of end of pipe treatment of PFAS especially costs for the water industry?
2. How will Defra take these costs into account in developing and implementing their PFAS plan? The Water Bill will need to include WFD article 4 exemptions regarding technical feasibility and disproportionate costs for the implementation of new environmental quality standards (EQS) for PFAS
3. In particular, the Water Bill needs to include EPR provisions to recover these costs from the producers of the PFAS chemicals - as in articles 20 - 23 of the EU UWWT Recast Directive see https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202403019
4. Where the costs of end of pipe treatment of PFAS are high, then Defra needs to take greater action in its PFAS plan to tackling sources (eg product controls) and pathways to reduce exposures of PFAS in the water environment - in line with the White Paper (p. 33)'s good shift towards ‘pre-pipe’ solutions. and ensuring that legislation, funding streams, and regulatory mechanisms support the delivery of pre pipe solutions.