WORSHIPFUL COMPANY OF WATER CONSERVATORS

BRIEFING ON A THINKPIECE ON THE CURRENT STATE OF AFFAIRS OF BIORESOURCES MANAGEMENT

SEPTEMBER 2025

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 related industries and their 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 assets created. The WCWC's purpose is *promoting a diverse and sustainable environment.*

2 The subject of sewage sludge (now known officially as bioresources) management has been one of cyclical interest and in 2025 there is a peak of interest, as part of the focus on water companies. Four recent Guardian articles attest to this:

https://www.theguardian.com/environment/2025/jul/09/environment-agency-insider-alleges-cover-up-sewage-sludge-farmland

https://www.theguardian.com/environment/2025/jul/08/like-fly-tipping-ministers-ignoring-pleas-to-cut-sludge-fertiliser-use

https://www.theguardian.com/environment/2025/jul/07/toxic-sewage-sludge-british-farming-pfas-chemicals

https://www.theguardian.com/environment/2025/jul/14/waste-disposal-practices-are-harming-the-environment

Along with the Greenpeace Petition:

Petition to keep toxic sewage off our farmland

3 It must always be remembered that Society has faecal aversion arising from proper public health training and this is rejuvenated constantly. Water Conservators, in all walks of life, cannot be complacent about public attitudes, however they arise. The current focus on the 'yuck 'factor of sewage discharges has intensified criticisms of current sludge disposal practices.

4 So, the WCWC has prepared a Thinkpiece on the present situation in bioresources management to contribute evidence rather than opinion. This is archived on the Company website under 2025 Thinkpieces. This briefing is based on the summary included in that. In doing so the WCWC updates a Thinkpiece from 2022, which is included as an Appendix. The main document is admittedly long, but there does not appear to any other which draws together all the threads and it is important that, any

assertion that some of the populist opinions are short on evidence, is backed by some exposure to that evidence.

5 **Headlines**

1. **For many decades biosolids (appropriately treated bioresources) have been used successfully in agriculture, now the overwhelming route for managing bioresources with increasingly assured practices. This has been a contribution to the circular economy and to the mitigation of climate change, but big changes are in train. Ofwat now sees that bioresources have much greater market potential to exploit innate resources value than current practices for using biosolids. But there are risks in that the Environment Agency, EA, will restrict times of application to agricultural land and there are concerns about the impact of PFAS and micro plastics on soil and crop quality. The EA wants to extend already extensive Standard Rules permitting for many aspects of bioresources management to include biosolids use in agriculture, and this is set out in the Strategy for the Safe and Sustainable Use of Sewage Sludge, in August 2023.The WCWC sets out several ideas for the ways forward.**

2. **There is no immediate threat from PFAS and microplastics, but their presence in biosolids could lead to unacceptable accumulation in soils and crops over long periods of time. Contrary to the descriptions in the media there have been, and are, significant efforts to understand the nature and extent of the problems caused by them and the consequent implications for bioresources management. Coupled with the technical impactions of wider market opportunities, the water industry has responded with a UK National Bioresources Strategy in September 2023. This formed a framework for bioresources in Company Plans for PR24 and started to prepare the way for PR29; and developed with Ofwat an extensive innovation programme. Any change of option from biosolids use will inevitably need a transition plan and will not be achieved overnight.**

3. **The problem has been slow progress in developing the EA strategy and in taking the PR29 Action Plan, for bioresources, forward. The fact that these two policy development streams do not feel well connected. Communication by the sector has not been as good as it should have been. The risks elaborated above have been exacerbated by the general distrust by the public on all things to do with sewage treatment, bioresources are a consequential casualty. This has given space for ill-informed criticism.**

4. **In making its comments, the WCWC draws on the experiences from the 1980s in laying the foundations for current practices and regulation.**

5. **The WCWC argues that all of the work should be brought together into a single focus, consistent with the aspirations of government for regulatory streamlining and waits to see what the outcome on the**

implementation of the recommendations of the Water Commission will be.

6 More details on key points are as follows

Context matters

1. The water companies and predecessors have managed sewage sludge (now known as bioresources) in several ways. They now rely principally on the agricultural use of appropriately treated products, known as biosolids (about 90% of all bioresources are managed in this way). The cost of this is significant, incurring up to 50% of sewage treatment costs. The value of the nutrients to agriculture is substantial, with the principal value being in the addition of organic matter for soil conditioning. This recycling is invaluable as a contribution to climate change mitigation and the circular economy.

2. This strategy is now at risk due to concerns about the run-off of nutrients applied by biosolids to land during Autumn and Winter, the threat of PFAS and microplastics to soil and crop quality. It is also a casualty of the general debate about the way in in which sewage is managed. This concern has been compounded by poor communication on policy evolution and slowness of its execution.

Too much complexity and confusion

3. The WCWC observes that there is increasing complexity, professional introspection and diversity of contributors; there is not a single focus for national strategy and progress. Whilst the routes of perception may vary, all are agreed that now is the time for change. The question is to what?

4. The WCWC agrees with the overall conclusion of the Independent Commission on Water and CIWEM (Chartered Institution for Water and Environmental Management) for more focus and an updating of regulations, although not necessarily with their routes to that conclusion.

Poor communication

5. The lack of communication by the sector means that there are some trenchant views flourishing on the immediate abandonment of current practices. This needs sorting out urgently.

6. For example, there is plethora of nomenclature which needs sorting out

7. The effort being made on research and innovation needs much more publicity and extending.

Slow delivery of promises

8. The Water UK National Bioresources Strategy and the Environment Agency (EA) Strategy for the Safe and Sustainable Use of Sewage Sludge were published almost simultaneously in September and August 2023 respectively.

9. The Water UK Strategy followed up the Ofwat strategy for bioresources for PR24 and provided a framework for water companies as part of the PR24 process; but is not now available in the public domain. A second phase was completed, with the aid of AtkinsRealis called the PR29 Action Plan, for bioresources endorsed by Water UK, EA and Ofwat in October 2024. The strategically important elements which will help shape alternative strategic approaches have not been started yet. Information on this is difficult to track down and if progress is being made it is not visible to a wider audience.

10. There is also an apparent lack of progress with EA Strategy which needs better expression of connection to the Ofwat Bioresources strategy.

11. Both strategies promised working groups working in parallel but there is no publicly available evidence of progress, and this is at the heart of some of the reasons for the ill-informed media articles. They were not referred to in the final report of the Independent Water Commission. The ‘blockages’ need removing and the strategies need bringing together as promised, maybe by establishing or re-invigorating joint working groups as a starter. Creating a single focus must be a high priority. This reflects the observations above about communication and complexity.

12. The lack of progress on regulatory reform not only causes the media criticisms which triggered this Thinkpiece, they also create uncertainty for water companies and investors.

Learning from the Past

13. Many of the lessons and evidence from the 1980s, which still underpin current regulations, have been forgotten and even paperwork had been lost. However, an archive has been established under the auspices of the Biosolids Assurance Scheme (Appendix 2).

14. Setting aside the rising concerns about microplastics and PFAS (per-and polyfluorinated alkyl substances, also known collectively as ‘forever substances’), there is no evidence that if the processes set out by the Biosolids Assurance Scheme (BAS) are followed, that there is pollution of water, soil or plants. There is no place for complacency. The BAS involves the concept of HACCP (hazard analysis and critical control point analysis), and work is continuing on hazards, contrary to the claims of the media.

Focus on future delivery

15. There is some dissonance on the way forward. Is it to maximise the commercial value of the resources content of bioresources or is it to find other ways of disposing / using the resources content due to the presence of PFAS, or is it both? The balance is moving towards finding other ways of treating the

bioresources in place of biosolids use. With a need to ‘keep it simple’ A quote from a contributor to this Thinkpiece was ‘deployable, sustainable and resilient’.

16. If change of strategy on agricultural use of biosolids is needed, current practice cannot be stopped overnight. A clear transition plan would be needed which would not be an instant overnight process.

17. The innovation programme is being widened necessarily.

18. Appropriate criteria for PFAS and microplastics in soil are needed urgently to plan ahead. This must involve understanding all the sources of these substances The WCWC suggests a framework for understanding the impact of PFAS but recognises that the micro-plastic problem is more challenging. A full understanding of all sources of these substances in soils is needed urgently.

Regulation

19. The Government must take its broader responsibilities more proactively, for example in examining the practicality of regulation of washing machines for microplastics discharge. Regulatory inaction is part of the problem, and all parties would welcome more attention to this to avoid uncertainty, for example when modifying permitting regulations.

20. The WCWC recognises the intention by the EA to move the regulation of the use of bioresources to Standard Rules Permitting and expects that the whole package of several rules will be brought together with ‘areas of deployment’ being a crucial factor. A streamlined ‘fit for purpose’ set of integrated Standard Rules Permits would be an ideal candidate for regulatory streamlining as envisaged by the Government. This should maintain the concept of supplier self-monitoring suitably updated to reflect contemporary quality assurance requirements.

21. The sensible application of the Farming Rules for Water Regulations (FRW) remains a priority and they could be incorporated into the integrated Standard Rules.

22. In parallel to the concerns of the media, the WCWC is sure that the water services will be pleased to see uncertainty removed provided that it does not introduce draconian administration. Any changes needed for PFAS and microplastics can be added in due course.

Some other specific recommendations relevant to all ways forward

23. In urging the re-creation of a single national focus, the WCWC has included the Standing Committee of Analysts and institutions conducting crop trials. Standard Analytical methods are needed very urgently.

24. The WCWC suggests that whatever the future holds, it may be worth exploring the possibility for land agents to become involved to facilitating administrative compliance with land-spreading restrictions on biosolids arising from the FRW.

25. The WCWC recognises the urgency of determining the ways forward which take account or PFAS and microplastics and sets out some suggestions. It is of a view that Government must make a more proactive contribution on behalf of the wider community to restrict uses. These are social problems and cannot be ‘off loaded’ on to the water sector to deal with. The WCWC support current actions being taken by Government of the banning of uses of PFAS.

Finally

26. The long-term way forward will be in the hands of whatever Government decides to implement on the Water Commission report and the WCWC hopes that it will heed the messages of this Thinkpiece. However, the whole topic cannot wait until this happens and some *pro tem* measures will be necessary to avoid more problems.

27. The WCWC observes that the way forward will have to deal with a mosaic of initiatives rather than straight line solutions and to repeat earlier comments… the best way of dealing with this is to create a single focus.

28. The WCWC stands ready to help.