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WORSHIPFUL COMPANY OF WATER CONSERVATORS

Promoting a diverse and sustainable environment

RESPONSE TO THE WELSH GOVERNMENT GREEN PAPER CONSULTATION ON THE USE OF SEWAGE SLUDGE IN AGRICULTURE

MARCH 2026

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. It produced an overview of its work in 2025, which included a Think piece on bioresources; this contains a lot of information and thinking on the topic relevant to this consultation, which it does not intend to reproduce but encourages readers to refer to it.

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

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

Current position and origins

3 The use of appropriately treated sewage sludge on agricultural land is regulated currently by the 1989 UK regulations (last legal edition November 2025) and a Code of Practice (last updated in 2018) implementing a 1986 EC Directive.

https://www.legislation.gov.uk/uksi/1989/1263/2025-11-01

https://www.gov.uk/government/publications/sewage-sludge-in-agriculture-code-of-practice

https://eur-lex.europa.eu/eli/dir/1986/278/oj/eng#:~:text=Council%20Directive%2086/278/EEC%20of%2012%20June%201986,when%20sewage%20sludge%20is%20used%20in%20agriculture.

4 The Code of Practice has been supported and extended, de facto, but not modified, by quality assurance practices to reduce risk, such as the Safe Sludge Matrix. These can be found on the website of the Biosolids Assurance Scheme. So operational practice has improved constantly.

https://assuredbiosolids.co.uk/

5 The origins of scientific knowledge predate the step change in 1989 by several years and in fact the Code of Practice is more demanding than the Directive. The practice of using treated sludge in this way has work successfully for many years, with it being favoured by Government as the Best Practicable Environmental Option for managing sewage sludge, and indeed this practice is encouraged by the 1991 Urban Wastewater Treatment Directive. The Code of Practice was set up to be modified regularly as information evolved on matters such as PFAS, or the use of biochar, but that mechanism is moribund. There are pressures for change, not all of which are referred to in the consultation.

6 The original work never intended that it would apply to septic tank sludges, but these were added to the Directive and restrictions only apply to the management of crops grown in land to which the septic tank sludge has been applied.

7 In recognition of the special status of treated products used safely in agriculture, the UK, and several other countries, agreed in the 1980s to use the term biosolids, which reflected good practice in communications, rather than the notion of 'dumping sludge on land'. The EC found that this did not translate well in multiple languages for regulation. It accepted the term for practical purposes but retained sewage sludge in the Directive. That dichotomy survived translation into UK law and practice. The WCWC, again, suggests that the nomenclature needs sorting out and this has been made more complicated by the introduction of future term

8 Almost all sewage sludge is now managed by conversion into biosolids, and the present system has been working well until recently. The Ofwat considered as far back as 2016 that sewage sludge offered other commercial opportunities to exploit the innate value of sewage sludge and introduced a strategy for bioresources.

https://www.ofwat.gov.uk/regulated-companies/markets/bioresources-market/

Bioresources in the context of sewage treatment plants (STPs) refers to all processes related to the collection, transportation, treatment, and recycling or disposal of ***sewage sludge****. This includes the management of organic material separated from wastewater (primary and secondary sludge) and its transformation into valuable, sustainable products.*

9 So biosolids use becomes a subset of this. The terminology has become confusing. Indeed, the term 'biowaste' is used in other regulatory contexts.. The WCWC, again, suggests that the nomenclature needs sorting out.

10 It has been recognised for some time, that the current approach left some acceptable activities in regulatory limbo. For example, the use of treated sewage sludge in forestry and for land reclamation is not covered by the Code of Practice and regulations and in theory, need an Environmental Permit, but as what? Will they be wastes? Similarly, if sewage sludge is mixed with other organic waste for treatment such a farm waste, the product is no longer qualified as biosolids nor complied with the 1989 restrictions and even though this was seen as an emblem of a forward looking Ofwat bioresources strategy, which seeks to broaden the opportunities of exploiting the innate value of sewage sludge and the synergies

and / or efficiencies of combining with other organic wastes, specifically with regard to operations and exploitation of beneficial outputs. And the Green Paper highpoints out that the use of digestate needs attention

11 A combination of these pressures, the rising prominence of new contaminants in sewage sludge such as microplastics and PFAS, concerns about nutrients in rivers and the demands for a more contemporary attitude to regulation led to the EA proposing in 2020 that it would bring in new rules for sewage sludge agricultural use; but for a variety of reasons this process has been very slow and that led to the media misconceptions of 2025 and the production of the WCWC 2025 Thinkpiece. The need for a step forward in regulation was identified by the Independent Commission on Water in its final report in July 2025.

12 The sector responded to the Ofwat bioresources strategy and the proposed changes in regulation with the National Bioresources Strategy, which underpinned water companies' AMP8 programmes under the wing of Water UK, but progress beyond PR24 has been slow for many reasons and this contributed to the angst of 2025.

13 Regulation of biosolids in Wales has tended to follow the same path as England with some local national embellishment. The NRW did not make any separate proposals for change in 2020. But with the restructuring of the water sector, it is making proposals for change as part of its response to the Final Report of the Water Commission in a Green Paper rather than as Defra in England has done in issuing a White Paper on the future vision for water and a separate consultation for the regulations on sewage sludge use .WCWC responses to the latter may be found on its website .
Hyperlinks
https://www.gov.wales/green-paper-shaping-future-water-governance-wales

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

https://waterconservators.org/wp-content/uploads/filr/4346/MAR-2026-BIORESOURCES-Response-to-Defra-fin2.pdf

The Proposals

14 The Green Paper sets out options

Option 1 – Integrate sludge fully into the Environmental Permitting Regulations
This legislative option would involve bringing the additional sludge activities fully under the Environmental Permitting Regulations, modernising and consolidating the currently fragmented system. Since they were first introduced, SUiAR and the associated Code of Practice have seen only limited updates, and their core structure and requirements have remained broadly unchanged. Over this period, sludge treatment processes, supply-chain arrangements and scientific understanding of contaminants have continued to develop.

To deliver this approach, the Environmental Permitting Regulations could be amended to include land application for recovery of sludge. SUiAR could be repealed, and relevant provisions in the Controlled Waste Regulations 1992 updated or replaced as necessary. This would consolidate oversight under a modern permitting regime.
This approach would give NRW the ability to cost-recover, provide clear regulatory oversight and enforcement powers, ensure consistency with England, and close future regulatory gaps such as those relating to persistent chemicals or other emerging contaminants.

This option aligns with the Commission's recommendation that regulatory oversight of sludge activity should be strengthened through a permitting framework. It also provides a more adaptable basis for regulation, allowing standards and requirements to evolve as treatment practices, technologies and scientific understanding continue to progress.

Option 2 – Non-legislative improvements to standards and assurance

This non-legislative option, which could provide an interim or complementary solution while legislative changes are developed. This could include strengthening voluntary assurance schemes such as the Biosolids Assurance Scheme and updating industry codes of practice so that they align with wider controls for materials applied to land. Any strengthened scheme would need to meet relevant regulatory requirements. Updated codes could help improve consistency and transparency across the sector. These measures would support quicker improvements in practice without the need for immediate legislative change.

However, this option would not introduce cost-recovery powers for NRW and would continue to operate alongside existing statutory arrangements. It may therefore enhance standards in the short term but would not address long-term coherence or adaptability available under a consolidated permitting model.

Option 3 – Combined legislative and assurance-based model

A hybrid option could combine key elements of the SUiAR into the Environmental Permitting Regulations. This would establish a statutory baseline while allowing earned recognition for an operator who is compliant and adheres to regulator approved assurance standards.

This model would provide scope for NRW to cost recover and provide regulatory flexibility while maintaining high standards amongst operators. Earned recognition reduces the administrative burdens for operators demonstrating strong performance, supported by robust monitoring arrangements.

Further work would be required to design the mechanisms for earned recognition and ensure proportionality and consistency across the system. This approach provides a phased pathway toward a more modernised permitting structure, offering both stability and flexibility during transition.

Option 4 – Updating existing regulations with enhance quality controls
This option would retain the existing legislative framework but modernise SUiAR to improve alignment with controls for other waste-to-land activities. It would also require all domestic sludge to be managed through a regulator-approved assurance scheme such as the Biosolids Assurance Scheme, helping ensure consistent standards across operators.
This approach could support clearer expectations and enhance confidence in sludge use as an interim step. However, it would not introduce cost-recovery powers for NRW and would continue to operate within an older statutory framework. It may therefore be most appropriate as a temporary or transitional approach while longer-term reform is developed.

Option 5 – No change to the current regulatory framework
Maintaining the current regulatory framework would provide continuity. However, it would not reflect the developments in sludge treatment processes, supply-chain operations or scientific evidence that have emerged since the SUiAR and Code of Practice were introduced. The absence of cost-recovery mechanisms, limited monitoring capability and reduced adaptability to future risks means that this option may not fully support long-term regulatory resilience or environmental outcomes.
Stakeholder views will help determine whether this approach remains appropriate for future needs.

Overview of potential options

15 The five options set out above reflect a range of potential pathways for the future regulation and oversight of sludge activities in Wales. They include legislative, non-legislative, hybrid and status-quo approaches. Each option has different implications for regulatory design, implementation and operation, and presents a range of potential advantages, limitations and practical considerations. At this stage, no preferred option has been identified.
Some options would introduce new regulatory mechanisms, while others would enhance existing arrangements or maintain the current framework. The Welsh Government is seeking views on how each option might operate in practice, including potential impacts on industry, regulators, land managers, public health and the environment.
Legislative options could offer opportunities to revise the underlying regulatory framework. Non-legislative and hybrid approaches may support improvements within the existing system or provide flexibility during any period of change. Continuity options may provide stability but may also require consideration of how effectively they meet future needs.
Given the differences between the Welsh and English contexts, we are particularly interested in stakeholder views on how each option might support clear,

proportionate and effective oversight in Wales, including any implications for data, monitoring, supply-chain arrangements and operational delivery.
We welcome feedback on all options presented, as well as any additional approaches or considerations that stakeholders believe should form part of this consultation. Any reforms and assurance schemes will be developed in line with Welsh Government policy and wider regulatory requirements, embedding Control of Agricultural Pollution Regulation and other relevant standards
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Regulation of Digestate in Wales – Call for Evidence and Options for Reform

16 Digestate produced from the anaerobic digestion (AD) of biodegradable feedstock is increasingly used across Welsh agriculture. It is primarily used as a sustainable bio-fertiliser, soil conditioner and nutrient source for agriculture, replacing synthetic fertilisers. Although it shares some characteristics with sewage sludge, it presents a distinct set of regulatory, environmental and operational challenges. The current framework for digestate management has evolved piecemeal, with differing environmental standards and oversight mechanisms depending on the type of feedstock, treatment process and end-use. This has resulted in uncertainty for operators, regulators and land managers, and raised questions about whether existing arrangements are sufficiently robust to protect water quality and environmental outcomes.
Feedback from stakeholders and emerging evidence highlight the need to consider digestate separately from sewage sludge. This includes understanding how AD plants operate in Wales, the scale and nature of their feedstocks, key properties of digestates, how digestate is treated and applied, and the regulatory controls governing its use. Welsh Government is aware of growing interest in this area, including from environmental NGOs, and the need to address potential gaps around environmental permitting, monitoring, consistency of standards, and the interface with existing waste and agricultural regimes.
Given these issues, we are seeking views on whether the current regulatory framework for production and use of digestate provides adequate environmental safeguards and delivers clarity for operators and land managers. This includes how the current options of regulatory tools for AD addresses the environmental risk of the process. We also invite evidence on how digestate use contributes to a circular economy in Wales, nutrient management pressures and water quality challenges in sensitive catchments, and whether stronger regulatory or assurance mechanisms may be required.
To support a clearer assessment of the options, this Green Paper includes a ***specific call for evidence on digestate production and use.*** *Specific questions related to digestate are included in the Consultation Response Form (questions 18 – 20*

WCWC response to the WG Proposals

17 In responding to the Defra consultation, the WCWC favoured the equivalent of Option 1 but with many caveats. And in doing so suggested creating a framework of regulations which would involve all those relevant to bioresources .In this framework there would be a series of focussed packages based on Standard Rules one of which would be for biosolids use and this could rely on an updated Code incorporating best practice under the current Code, including quality assurance. It must be flexible enough to be updated swiftly as needs arise. One new package could be for digestate and another for biochar.

18 The WCWC maintains it stance on the principles of Defra option1, based on an integrated framework of Standard Rules packages one of which would be the successor to the SUiAR backed by Statutory Guidance based on an updated Code. But this would resonate well with option 3 in the Green Paper. The WCWC considers that option 4 has great merit but its unlikely to satisfy the external demands for consumer attitudes to regulation .But involving BAS in option 3 would be very good

19 The WCWC also supported complementary approaches by the nations of the UK . It suggests that bringing together Option 1 of Defra and Option 3 of the WG as one package in the Standard Rules integrated framework approach would be a very good way forward.

20 The WCWC continues to advocate complementarity of regulation of bioresources throughout the UK. And repeats its call for one central focus of coordination as was the case in former years. At least this could focus on quality criteria and standards and monitoring. There must be coordination of and cooperation on ongoing research on treatment technology to mitigate contaminants or to destroy them potentially producing alternative outputs which could be applied to agriculture (for example biochar). Research must also include field trials, soil science, epidemiology etc and analytical methods coordinated centrally as it was in the 1970s-1980s.The development of hazard, agronomic, soil and crop criteria will be crucial.

21 The WCWC response to the White Paper suggests drawing together the work of UKTAG, the proposed drinking water advisory group and the Standing Committee of Analysts in a central Common Standards Unit. It suggested that this could be extended to include bioresources, thus sharing data and consistent approaches across all sectors.

22 As with all changes to regulation, the WCWC supports a transition plan. The WCWC urges the Government to take a more proactive, positive stance on the benefits of bioresources. As with all changes in regulation, there must be a sensible transition plan. They must be subjected to cost benefit analysis. It is possible that the additional costs will have been allocated for in PR24 under the Water UK National Bioresources Strategy, if not, they must be treated as a notified item and certainly included in PR29.

23 The WCWC also reminds the Welsh Government that it too can participate in changing the context by looking at other opportunities, such as extending the powers of water companies to regulate the content of trade effluents such as PFAS.