

03 December 2024

Farming Rules for Water Statutory Guidance Review - Response to the request for feedback

Background

This document sets out Water UK's response to Defra's request for feedback as part of its review of the Farming Rules for Water (FrFW) Statutory Guidance.

Water UK is the trade association for the UK's water industry and includes all regulated water and wastewater companies in England, Northern Ireland, Scotland and Wales.

Rather than answering all the questions in the call for evidence, we use this note to summarise some of the main points we would like Defra to consider as part of its review process and emphasise the associated risks.

The water industry appreciates that the Court held in the May 2024 Judicial Ruling that there are inconsistencies between the EA's approach and the content of the Statutory Guidance¹ which is clearly undesirable. Similarly, we note that the Office for Environmental Protection (OEP) has said that it "...believes that the Statutory Guidance may be unlawful as some of the wording is not consistent with the regulations themselves."² We agree with the OEP that it is vital to clarify the law given that "this guidance is likely to be relied upon by farmers and may therefore lead to breaches of the regulations when applying manure or fertiliser to the land."³

The industry will always seek to comply with whatever legal obligations are placed on it and will always prefer consistency in interpretation among regulatory bodies over inconsistency. As these issues are addressed by the relevant bodies, Water UK wishes to set out the practical implications of any sudden change.

¹ At [130] in *R (River Action) v Environment Agency* [2024] EWHC 1279 (Admin)

² <https://www.theoep.org.uk/news/oep-launches-investigation-lawfulness-government-guidance-water-pollution-agriculture-0>

³ Ibid.

This response shows that the environmental and financial consequences of a sudden end to the ability to recycle biosolids on land would be profound. However, the water sector, working through the PR29 Action Plan, wants to collaborate with regulators to identify the best use of bioresources based on a more granular assessment of quality and utilising a range of emerging technologies.

Core Issues

Lack of credible alternatives presently available

Recent landbank modelling (National Landbank Assessment – August 2024, previously shared with Defra), together with the experience of autumn 2021 (where the EA enforced wholesale its interpretation of the FRfW), show that it is not possible to recycle the current volume of organic manures (including biosolids) without the Statutory Guidance. The immediate removal of the Statutory Guidance would lead to 70% of biosolids (2.1 million tonnes) without a destination by the autumn of 2025. While, in theory, biosolids could be applied in the spring, in practice, this would not be possible for a large proportion of biosolids due to complications associated with recycling to land at that time of year.

Although there are alternatives to recycling biosolids, none can be made available quickly, and each would involve very significant costs.

Incineration could be an option, but only one such incinerator is currently operating in the UK.⁴ As such, the available capacity would not cover the industry's needs. Planning, building, and commissioning new incineration capacity could take at least a decade.⁵

In addition to incineration, four alternatives are, to various degrees, readily available and have been explored in detail. These are landfilling at non-hazardous landfill sites, land restoration by filling in, for example, historic open-cast coal mines), co-combustion with other waste feedstocks at existing Energy from Waste (EfW) plants and co-combustion at existing cement kilns.

The research concluded that there is minimal availability of land restoration sites and limited opportunities for the various mono and co-combustion routes (beyond what already exists, as described above). Therefore, landfilling is the only alternative for any significant volume of biosolids. However, there are concerns about biosolids' suitability for landfills, given the risk of hazardous leaks in the ground, including groundwater, physical stability, methane release, and odour nuisance. It is because of the

⁴ Atkins Realis, June 2024, NATIONAL PLAN B – A REVIEW OF THE RESILIENCE OF BIOSOLIDS OUTLETS IN ENGLAND, WALES AND SCOTLAND

⁵ Atkins Realis, June 2024, NATIONAL PLAN B – A REVIEW OF THE RESILIENCE OF BIOSOLIDS OUTLETS IN ENGLAND, WALES AND SCOTLAND

release of methane that the last government said that it “...is committed to achieving the near elimination of biodegradable municipal waste to landfill from 2028.”⁶

Even if those issues could be overcome, enabling landfill disposal would require permit changes from agricultural recycling to landfill disposal, trigger additional Industrial Emissions Directive (IED) site permits and modifications of existing permits. A conservative estimate is that this would take around 2 years to process, putting extra pressure on the Environment Agency’s resources. Landfilling bioresources would cost the water industry up to £2.8 billion by 2028.

Almost 300,000 tonnes of biosolids are already stockpiled in farmers’ fields⁷ (as of November 2024) ahead of their planned application to crops in autumn 2025. That will increase weekly to 2.1 million tonnes by the time land spreading is due to commence. Should recycling to land be curtailed, farmers are very likely to refuse stockpiling and cancel bioresources contracts, forcing water companies to store bioresources on their own premises. The permitted capacity for storage varies, but on average water companies have at national level 11.6 weeks⁸ worth of capacity, meaning that should they no longer have the option to stockpile on-farm the total storage capacity of biosolids would be reached within, at best, 3 months.

Water companies would need to acquire additional land quickly, build safe storage facilities on that land and obtain the necessary permits from the Environment Agency. The industry’s strong view is that, without a clear government direction and commensurate guarantees from Ofwat that sufficient funding would be authorised, this would not be possible in the 12 months required.

Viable and potentially more desirable alternatives to recycling to land (e.g., advanced thermal conversion) are possible but will require huge investment and take ten years or more to deliver. Significant efforts will be needed in piloting various technologies to ensure they do not result in worse environmental outcomes and a significantly higher cost to water customers.

Concerns about economic and regulatory issues

At the PR24 Draft Determination, Ofwat set out that it would only allow costs for companies to continue to recycle biosolids for agriculture in line with the current statutory guidance. Any end to the lawful ability for companies to recycle biosolids to land would result in potentially significant additional costs for companies that will not be included in the expenses allowed for by Ofwat in Final Determinations.

Given the uncertainty concerning the lawful ability to recycle biosolids to land, water companies have asked Ofwat to amend the Notified Item, which sets out the basis on which it would fund material

⁶ <https://consult.defra.gov.uk/waste-and-recycling/cfe-near-elimination-bio-waste-to-landfill/>

⁷ Note stockpiling is allowed 12 months ahead of application

⁸ From empty, note that some of that storage will already be in use

increases to a company's costs by way of an interim determination. Companies will learn of Ofwat's decision when it publishes its Final Determinations for PR24 on 19 December.

In addition, were the lawful ability to recycle biosolids to land end, the farming sector would face a significant loss of nutrients (estimated to be £60 million per annum)⁹ that will have to be replaced with synthetic fertilisers. These fertilisers have significant environmental impacts.¹⁰ Consequently, the loss of bioresources would lead to increased carbon emissions estimated at around 2.5-5 million tonnes of CO₂e per annum due to the more energy-intensive processes that would be required to create synthetic fertilisers,¹¹ and the missed opportunities from the carbon sequestration benefits of recycling biosolids to agricultural land and recovering nutrients.

Risks of pollution swapping

Three other possible alternative ways to manage bioresources have been evaluated for their suitability to generate a product that can be recycled in a more beneficial manner without causing harm. The study¹² concluded that although steps could be taken to reduce volumes or dilute content, those steps had significant drawbacks:

- Liquid-digested biosolids (which reduce volumes of biosolids) pose a greater environmental risk, are less practical, would negatively affect overall carbon emissions and come at a greater capital and operational cost.
- Pelletised/granulated biosolids provide a modest benefit in terms of practicality of use and risk of compaction with potentially a minimal decreased risk of pollution. However, it would come at a significant cost to build and operate and have a significant negative impact on overall carbon emissions.
- Co-composting (i.e., mixing 1/3 of biosolids with 2/3 of green waste) has no real environmental benefit. However, it significantly increases the amount of material (+200%) to be handled and spread, making it more expensive, negatively impacting overall carbon emissions, and requiring significantly more land than alternative biosolids products.

⁹ Own estimates

¹⁰ See for example Parliamentary paper, 2024, [The future of fertiliser use](#)

¹¹ UK Water Net Zero Carbon: Quantifying the benefits of biosolids to land. Available from: <https://assuredbiosolids.co.uk/wp-content/uploads/2021/12/UK-Water-Net-Zero-Quantifying-the-role-of-biosolids-to-land.pdf>

¹² Grieve Strategic, 2023, Alternative treatment options for biosolids

Management of risks from biosolids

Although there are seemingly insurmountable challenges to stopping the recycling of biosolids to land in the short term, the industry is continuing to develop medium-term alternatives. As that occurs, the water industry is working to support farmers, given the challenges, minimising the risk of diffuse pollution.

In 2022, the industry presented the '20 Measures' initiative to the Environment Agency to demonstrate it was doing all it could to support farmer compliance with the FRfW Regulations. Several of these measures go beyond the FRfW Regulations requirements and further reduce the risk of pollution associated with recycling biosolids. In 2023, the 20 detailed measures were shared with the EA; agreement was reached on the majority (18 out of 20), with outstanding nitrogen and phosphorus nutrient management items.

Assured Biosolids Limited¹³ will shortly start a consultation on introducing additional, water industry-funded enhanced measures to the Biosolids Assurance Scheme (BAS)¹⁴ to go even further beyond FRfW Regulations requirements in helping to reduce the risk of diffuse pollution, including:

- Mandatory nutrient management training and assessment for all farm advisors;
- Increasing advice and checks on farmer's nutrient management plans from 10% to 25%;
- Spreading risk maps to be produced for every application of biosolids to agriculture;
- Not recycling biosolids during the most high-risk period of the year (winter) and;
- Restricting biosolids applications in advance of covering crops.

Adopting these additional enhanced measures is a pragmatic approach as they will continue to raise the level of environmental protection while enabling the continued recycling to land of biosolids.

The risks of diffuse pollution from different types of organic manures are not identical, so reflecting an approach that distinguishes high risk (e.g. slurries) from low risk (e.g. bioresources) in any update to the Statutory Guidance would be beneficial as a further way to retain the benefits from application to land and avoid negative impacts.

The role of bioresources in the circular economy

Around 70 million tonnes of organic manures in England and Wales are recycled annually to agricultural land, including farmyard manures, slurries, digestate, compost, paper crumble and biosolids. Of this, only c.3.4 million tonnes (or c. 5%) are biosolids from wastewater treatment works. Notably, biosolids (unlike

¹³ ABL is a not-for-profit organisation owned by the 11 water and sewerage companies operating in Great Britain. ABL owns the Biosolids Assurance Scheme (BAS).

¹⁴ The Biosolids Assurance Scheme (BAS) is a certification standard that covers 100% of UK biosolids recycled to land, and a third-party Certification Body audits with UKAS accreditation.

most organic manures) are legally defined as waste¹⁵ (being permitted as a waste recovery activity for the purpose of agricultural recycling). Therefore, the controls and restrictions on its use are far greater than those on most other organic manures. All biosolids from water companies are treated and recycled under the UKAS-accredited BAS.

The agricultural recycling route is the highest-ranking management option in Defra's waste hierarchy guidance, after biosolids reduction and prevention. Ending the recycling of biosolids to land would, at least in the short-term, lead to the landfill or stockpiling of most bioresources, missing an opportunity for resource recovery and contradicting the waste hierarchy, which places landfill and disposal without recovery as a last resort.

Waste hierarchy



Source: Defra, Waste Hierarchy Guidance [Waste hierarchy guidance](#)

PR29 Action Plan

Our estimates are that enabling alternative bioresource recycling options will take at least 10 years, and require significant resources, research and multi-sectoral planning. For example, one medium-sized Water and Sewerage Company estimates that moving away from recycling to land would cost £1.8 billion over

¹⁵ The Sludge (Use in Agriculture) Regulations 1989 defines sludge as the residual sludge from sewage plants treating domestic or urban waste waters and from other sewage plants treating waste waters of a composition similar to domestic and urban waste waters. The European Waste Catalogue (EWC) Code for sewage sludge is **19 08 05**.

the next 20 years, and early industry estimates indicate a range of £10-20 billion for the whole industry over the same period.

The Chartered Institute of Water and Environmental Managers initiated the Water Industry PR29 Action Plan in 2024, gathering inputs from the water industry, Defra, the EA and Ofwat to identify and prioritise the work needed for a medium to long-term transition from recycling to land of bioresources. Following stakeholder engagement, the action plan is being finalised and, when ready, will set out a series of measures needed from different actors to scope, assess and deploy alternatives. The plan's overall vision is for AMP8 to be used as a planning cycle to pilot new technologies, so they are ready for deployment in AMP9.

The water sector, working through the PR29 Action Plan, wants to collaborate with regulators to identify the best use of bioresources, based on a more granular assessment of quality and utilising a range of emergent technologies.

The PR29 Action Plan will need time and investment to develop existing concepts into commercially viable technologies able to deliver positive outcomes for society and the environment. Extensive changes to the Statutory Guidance could undermine this critical work, which has been committed to by industry and regulators.

Conclusion

We caution Defra against sudden amendments to or the removal of the statutory guidance. Research conducted over the past 6 months suggests that, in addition to the lack of credible alternatives, the removal of the guidance would lead to widespread disturbance, pollution swapping and increased degradation of the environment. Furthermore, the costs of adapting to any significant amendment to the Statutory Guidance would be inefficient.

We recommend the statutory guidance be retained broadly as it stands in the short-term, but with the introduction of some light-touch and risk-based additional measures to reduce diffuse pollution risk. In the meantime, Defra should seek to undertake a full review of water and its interaction with a more comprehensive suite of regulations in agriculture, with the broader goal of creating a long-term approach to land management that achieves the optimal balance between its aims of protecting the environment, supporting a circular economy and ensuring food security.