Written evidence submitted by Water UK (FR0091)

Summary

1. Water UK represents the water companies of England, Wales, Scotland and Northern Ireland. Farmers are customers for the water industry's biosolids - 8,500 tonnes of which are manufactured every day in England as part of the wastewater treatment process. These biosolids are used as crop nutrients and organic matter to improve the health of soil.
2. We strongly support the intent behind the Farming Rules for Water (FRfW) and the need to take urgent action on river water quality. It is unacceptable that this has remained flat for a decade.
3. This lack of progress has many causes (see Annex A). One is the water industry, which is investing over £5billion through to 2025 to tackle its sources of pollution, and has set out a plan for transforming the position of rivers nationally[1]. Another is agriculture – and in particular how nutrients are applied to the land.
4. It is inarguable that much stronger action is needed on nutrient pollution from farms. That means tougher rules – including many of the provisions in FRfW – as well as better support for the many responsible landowners and farmers who are trying to do the right thing. Otherwise this pollution will continue causing environmental harm at levels that are intolerable to the public and inconsistent with statutory targets.
5. Unfortunately, FRfW is now being interpreted in a way that conflicts with its original stated goals. The current interpretation of Rule One of FRfW risks causing the unintentional collapse of England's bioresource market, so ending most of the supply of an affordable and high-quality soil conditioner.
6. The results are likely to be environmentally irrational. They are likely to include the construction of large numbers of incinerators to burn a material that would otherwise be recycled. This would harm agriculture, the environment and bill payers, who would foot the cost of unnecessary investment that could run into the £billions. It would also significantly increase the sector's carbon and energy use at a time when the water industry has ambitious plans to reduce these.
7. There are much better policies for protecting rivers. One would be building upon the 'Biosolids Assurance Scheme,' (BAS). This scheme, run by a not-for-profit company created by the water industry, employs an independent certification body to audit compliance across the treatment, transport, storage and recycling of biosolids to agricultural land (including the rate, frequency and timing of applications). It is built around legislative requirements, best practice, sustainability and transparency and could be further strengthened and modified to address any concerns and further

[1] Water UK (September 2021), '21st Century Rivers: Ten Actions for Change'

embed best practice. This would allow a risk-assessed approach to be adopted that took into account the nature of the product, the receiving land and the local watercourses. That is the right, sustainable approach for recycling a material that would otherwise have to be burned as a waste, and means sustainable methods can be found for each location biosolids are used rather than through applying blunt instruments like generic rules. We would be very happy to work with Government and regulators on how the scheme can be further developed and have already conducted work on this.

8. If Government and regulators do wish to continue with the current interpretation of Rule One, it could take roughly a decade before we have enough incineration capacity in place to deal with the 3.2million tonnes of biosolids currently recycled to land in England. This will require years of interim solutions involving storage in fields that will also bring environmental impacts, including odour and leaching, and will be difficult to manage at locations right across the country.

- **What impact, if any, is the EA's implementation of Farming Rules for Water preventing farmers from spreading organic fertiliser?**

9. Biosolids from the water industry provide major plant nutrients and stable organic matter. They reduce reliance on carbon-intensive or imported manufactured fertilisers that are also finite and non-renewable. Biosolids' organic matter provides a host of soil quality benefits as well as sequestering carbon and reducing greenhouse gas emissions. Recycling biosolids to agricultural land improves soil quality and fertility and completes natural nutrient and carbon cycles.

10. In 2019, the vast majority of sludge from wastewater treatment works (around 87%, or 3.2 million tonnes) was recycled to agricultural land in England. This is worth circa £25m in equivalent value in manufactured fertiliser. Of the remainder, 6% went to land restoration, 4% was incinerated and 3% went to other industrial uses. Until this year, the majority of the biosolids was stockpiled by land managers in the winter, spring, and summer months, before spreading to land each autumn. As a result, the water industry's daily production of biosolids was moved on a regular basis to farms for storage until the following autumn. The vast majority of UK cereal and oil seed cropping is autumn-planted, and this is where and when most of the biosolids are applied.

11. Because of the current interpretation of Rule One of FRfW, the following impacts are being felt:

    i. **Land managers are now very reluctant to accept biosolids that ultimately they may not be able to spread to land in Autumn 2022**. Water companies have seen in some cases a 50% reduction in demand from farmers due to uncertainty about the regulations. They are making every effort to find alternatives such as application in spring, but this is challenging due to competition from 45 million tonnes of other manures and a limited landbank. Other outlets such as land restoration and incineration are also being utilised where possible, but there is extremely limited capacity and these alternative outlets are not the best practical environmental option. Companies are needing to transport their biosolids further to recycle them, increasing their transport related carbon footprints.

    ii. **The storage buffer at water industry treatment centres, which is only designed to allow for normal fluctuations in demand such as from abnormal weather, are now being exhausted**. The industry continues to keep the Environment Agency informed of this emerging situation and

have requested their support to ensure that appropriate measures are taken with environmental risk management as the focus.

iii. **Companies are now starting to make use of Regulatory Position Statement 253 to enable the storage of excess treated sewage sludge not at the place of use**. This means that some biosolids are being stored in fields (but cannot be used), and some at sites which have previously not been used for storage of biosolids.

iv. **Regulatory uncertainty**. The scale of investment required for a fundamental change in the management of biosolids cannot be delivered overnight, and was not considered in any impact assessment when the rules were first drafted. The water industry is currently working on business plans for the second half of the 2020s and needs to know if a large investment into incinerators is required or not.

12. It should be stressed that the water industry cannot reduce the rate of biosolids production to mitigate these risks - and indeed we expect volume to increase due to tightening water quality permits.

- **Are there changes that should be made to the rules - or how they are applied?**

13. The current interpretation of Rule One does not reflect our original understanding of how the rules would be applied, or our interpretation of the original consultation, impact assessment and other discussions that took place when the rules were developed a few years ago. Defra's stated objective for FRfW at the time was to "standardise good farm practices that many are already performing".

14. We are therefore calling for two immediate changes:

i. **The rules should be applied in the way in which they were originally intended, allowing farmers to adopt an appropriate approach for their land**. Through the Biosolids Assurance Scheme, the water industry can support land managers to deliver this in a risk-based manner that takes into account the product, receiving soil and catchment watercourses.

ii. **Government and regulators must provide land managers with confidence that Autumn 2022 spreading will be allowed**. This will help stabilise the immediate situation and reduce some of the disruption taking place to wastewater treatment operations (though a sustainable long-term solution is also required beyond this timeframe).

15. In addition to these immediate changes, we welcome the fact that Defra and regulators have said they are open to a longer-term discussion about the right public policy outcomes on biosolids. To inform that, we recommend three further steps:

iii. **Agreement on the specific changes needed to the Biosolids Assurance Scheme in order to provide sufficient environmental protection.** The water industry has been proactive in ensuring the safe and sustainable recycling of biosolids to agricultural land through the development of the Biosolids Assurance Scheme. Research undertaken this year recommended further

measures to reduce impacts, such as limiting applications on sandy soils, reducing readily available nitrogen (RAN) content through the introduction of a dry solids limit, as well as well as increasing advice and training for farm advisors.

iv. **Genuine openness from all parties to collaborating on a clear long-term strategy for biosolids, with time allowed for it to be implemented.** The water industry has already agreed to support this work and asked the Chartered Institution of Water and Environmental Management to lead it as an independent and evidence led institution. This will help provide reassurance and allow for long-term planning. This should consider the genuine public policy trade-offs between different kinds of environmental and other outcomes and promote innovation in the use of biosolids.

v. **Early consultation by Defra and the Environment Agency with wider environmental and other stakeholders on long-term outcomes, including the Committee on Climate Change** on the viability and impact of incineration of over 3m tonnes of bioresources per year (e.g. to confirm how this is incorporated into Defra's 'waste' sector targets within the 6th Carbon Budget).

- **What are the best ways of preventing agricultural diffuse pollution?**

16. An independent team of soil and environmental scientists led by environmental consultants ADAS undertook a comprehensive review of the risks of diffuse pollution of air and water from biosolids applications. It concluded that "On balance, autumn biosolids applications which are incorporated into the soil within 12 hours of application provide the best option for minimising diffuse air and water pollution". It also highlighted that applications to sandy soil on the autumn should be avoided.

17. The industry has therefore proposed to implement three new commitments to minimise the risk of diffuse pollution from biosolids applications:

i. No biosolids to be applied to sandy soils in the late summer/autumn except to crops which require autumn nitrogen (e.g. oilseeds and grass in certain circumstances);

ii. Increased nutrient management advice will be provided to farmers/land managers to allow them to make informed decisions. Additionally, the training provided to advisors will be increased; and

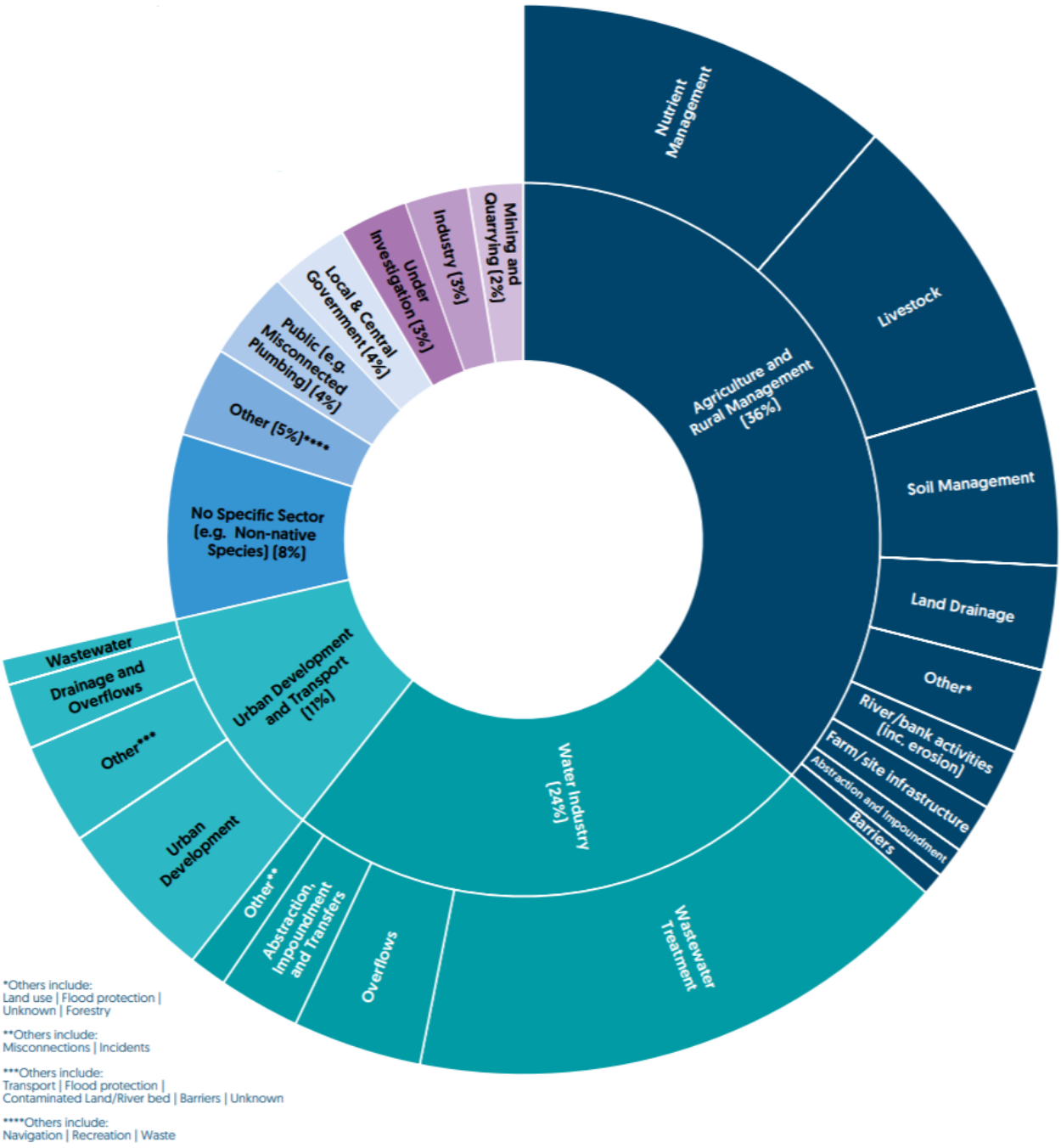
iii. A minimum dry solids limit for biosolids cake will be progressively introduced to reduce the concentration of RAN.

18. Collectively, this will provide appropriate protection for water quality. It is an approach also supported by an assessment of the impact of the FRfW on all organic manures, funded by the Agriculture and Horticultural Development Board and overseen by representatives from Defra, the Environment Agency, the National Farmers Union (NFU), FACTS, Agricultural Industries Confederation (AIC), the resource management industry, academics, technical experts and more. The impact assessment concluded that:

"*Effective management of organic manures requires consideration of the 'balance of risks' to water, air and soil as well as practical considerations, taking into account not only the type of organic*

material and when it is applied, but how and where it is applied. Autumn applications to light textured soil present the greatest risk of nitrate leaching. The risk of soil damage from spring applications is also lowest on light soils. By contrast ammonia losses to air and phosphorus losses to water pose the greatest pollution risk on clay and medium soils, and spring applications pose a significant risk of compaction on these soil types. Clay and medium soils also have more limited opportunities for spring cropping."

Annex A: Causes of Rivers Failing to Achieve "Good Ecological Status" Under the Water Framework Directive



Source: Environment Agency Catchment Data Explorer. Accessed September 2021.