



Submission by The Exmoor Society to the House of Lords Environment and Climate Change Committee inquiry into Pet Parasite Medication

The Exmoor Society welcomes the opportunity to make a late submission to the Committee's inquiry into pet parasite medication.

The Exmoor Society is a charity established in 1958 to promote and protect Exmoor National Park for the benefit of local communities and visitors. Our concern in this submission is the growing evidence that pet parasiticides, particularly products containing fipronil and imidacloprid, are contributing to chemical pollution in rivers and streams, including in protected landscapes such as Exmoor.

This submission draws principally on:

1. Bourne-Taylor, H. 2026. The effects of veterinary tick and flea treatments on freshwater invertebrates and ecosystems. Buglife, The Invertebrate Conservation Trust. This review is based on 166 documents, including 131 peer-reviewed scientific papers.
2. The All-Party Parliamentary Group on Bees and Pollinators, Spring 2025 Report, pages 28 to 30, which summarises evidence given to MPs on pesticide contamination from veterinary medicines and the regulatory gap at the Veterinary Medicines Directorate.

The Society, together with environmentalist Jeff Gill, has also submitted a complaint to the Office for Environmental Protection about what we consider to be regulatory failure by the Veterinary Medicines Directorate. This submission summarises the key points relevant to the Committee's inquiry.

Summary

Fipronil and imidacloprid are highly toxic pesticides. Both have been restricted or banned for outdoor agricultural use because of their effects on non-target species, yet they remain widely available for routine use on pets, including through general sale products.

The evidence shows that these chemicals are widely present in UK freshwaters, often at concentrations exceeding safe ecological thresholds. Wastewater treatment works do not remove them effectively. The main pathway is now understood to be household drains, through pet washing, handwashing, bedding, house dust and other domestic routes following treatment of cats and dogs.

The current regulatory system has not kept pace with the evidence. Companion animal parasiticides have been treated as low environmental risk; down-the-drain pathways have

not been properly assessed; routine monitoring is inadequate; and no Environmental Quality Standards have been set for fipronil or imidacloprid in UK freshwaters.

We ask the Committee to recommend urgent action to reduce environmental harm while maintaining proportionate protection for animal and human health. Products containing fipronil and imidacloprid should no longer be sold as general sale products. Their use should be controlled by veterinary professionals and based on risk, diagnosis and need, not routine prophylactic treatment.

1. Environmental contamination

The contamination of UK waters by fipronil and imidacloprid is well documented.

A study using Environment Agency data from 20 English waterways between 2016 and 2018 found fipronil in 98.6% of samples and imidacloprid in 65.9%. Mean concentrations of fipronil and its metabolite fipronil sulfone were 5.3 and 38.1 times their chronic toxicity limits respectively.

In 2022, fipronil was ranked the worst organic substance detected in English surface waters out of 1,114 chemicals assessed, being found in more than 75% of samples. In 2023, imidacloprid was ranked as the contaminant posing the maximum risk across the Greater London catchment.

A 2021 to 2023 survey of nine Welsh rivers found imidacloprid in 77% of samples and fipronil in 44%. Detection odds were 26 times higher for imidacloprid and 8 times higher for fipronil at urban sites. Concentrations exceeded Predicted No Effect Concentrations in 38% to 44% of urban samples.

Recent work has also found imidacloprid in 100% of effluent samples at 29 out of 30 wastewater treatment sites tested. Wastewater treatment plants do not remove these chemicals effectively and therefore act as a major route by which pet parasiticides enter rivers.

2. Relevance to Exmoor

Exmoor's rivers and streams are of high ecological importance. They support invertebrates, fish, birds, mammals and rare habitats, and are central to the natural beauty and biodiversity of the National Park.

Preliminary data from ongoing studies suggests that fipronil and its more toxic metabolites are being found at concerning levels in small streams and rivers on Exmoor. This is particularly troubling because these watercourses are often small, fast responding and ecologically sensitive. They have less dilution capacity than larger urban rivers and are vulnerable to chronic low-level chemical stress.

Research by the University of York has already shown alarming levels of pharmaceutical pollution in Exmoor National Park's waterways, with some rivers on Exmoor containing higher concentrations of human medicines than rivers in major cities such as London.

Although that study did not include fipronil or imidacloprid, it demonstrates the significance of down-the-drain pathways in remote and protected landscapes. The same pathway is now understood to be central to the entry of pet parasiticides into freshwater systems.

This should not be seen as an urban pollution problem only as it is also a rural catchment problem and a protected landscape problem.

3. Ecological harm

Fipronil and imidacloprid are designed to kill invertebrates. Their presence in freshwater is therefore of direct ecological concern.

The evidence reviewed by Buglife shows that imidacloprid reduces survival, feeding, growth and reproduction in mayflies, stoneflies, midges, dragonflies, damselflies and freshwater shrimps. These groups are fundamental to healthy river ecosystems and provide food for fish, bats and birds.

Environmental concentrations as low as 0.03 micrograms per litre have been shown to cause mayfly death. Welsh river studies have reported more than 90% declines in the abundance of key invertebrate families, including Heptageniidae and Limnephilidae, with increasing concentrations of imidacloprid near contaminated surface drains.

Fipronil also impairs growth, emergence and behaviour in freshwater midges at environmentally realistic concentrations. Its breakdown products are often more toxic and persistent than the parent compound.

These chemicals threaten the base of the freshwater food web. Their effects are not limited to the organisms they are intended to kill, they have consequences for fish, birds, bats and the wider ecological functioning of rivers.

4. Pathways into the environment

The Committee has asked how pet parasite medications enter the environment. The evidence points strongly to domestic wastewater pathways.

Fipronil and imidacloprid can be transferred from treated pets to hands, clothing, bedding, floors, carpets, house dust and bathwater. They enter drains through pet bathing, washing of pet bedding, handwashing, household cleaning and other domestic routes.

Research has found that 100% of wash-off samples from treated dogs contained fipronil and imidacloprid. It has been estimated that 9.1% of applied imidacloprid and 6.0% of applied fipronil can pass into waterways via household drains alone.

This is a regulatory blind spot. The environmental risk assessment system for veterinary medicines has not properly addressed down-the-drain exposure from companion animal products, nor cumulative exposure from repeated monthly treatment across millions of pets.

5. Regulation and monitoring

The central regulatory problem is that the VMD's framework has treated companion animal parasiticides as low environmental risk, despite the toxicity of these substances and the scale of their use.

Under the current VICH two-tier framework (*International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products*), veterinary medicines for non-food animals are generally assumed to pose low environmental risk. As a result, many companion animal products have not been subject to the level of environmental assessment now required by the evidence.

The test species used in risk assessment are also inadequate. *Daphnia magna* is commonly used as the standard freshwater test organism, yet it is much less sensitive to imidacloprid than many freshwater invertebrates. This risks systematically underestimating ecological harm.

There is also a serious monitoring gap. Veterinary pesticides are not routinely monitored in water in the way that would be expected for substances of this toxicity and prevalence. The four UK environment agencies have not established Environmental Quality Standards for fipronil or imidacloprid. Without such standards, monitoring is incomplete and regulatory action is weakened.

6. Inconsistency with agricultural controls

There is a striking inconsistency between the treatment of these substances in agriculture and in veterinary medicine.

Imidacloprid was banned for outdoor agricultural use in 2018 because of its harm to non-target species. Fipronil's agricultural approval ended in 2017. Yet both substances remain available for routine use on pets, including in products sold without veterinary prescription.

This inconsistency is not scientifically credible. A chemical that is too harmful for outdoor agricultural use does not become environmentally benign when applied repeatedly to millions of pets and then washed into drains.

7. Animal and human health

The Exmoor Society recognises that parasite control can be important for animal welfare and, in some cases, human health. We are not calling for the removal of necessary veterinary treatment. We are calling for proportionate, evidence-based control.

The present problem is routine blanket treatment, often monthly, regardless of need, season, parasite burden, animal lifestyle or environmental risk. This is not justified where the substances involved are highly toxic to aquatic life and are being detected in rivers at harmful levels.

The solution is to ensure that use is guided by veterinary advice, risk assessment and diagnosis. This would protect animal welfare while reducing unnecessary chemical loading into the environment.

There is also a human exposure issue which has received insufficient attention. Repeated monthly application of these products in domestic settings creates potential chronic exposure through skin contact, house dust, bedding and handling of treated animals. User risk assessments should take account of chronic exposure from all likely pathways.

8. Legal and policy duties

The VMD's regulatory decisions have direct consequences for water quality. Those decisions should be consistent with the UK's legal duties to prevent deterioration of water bodies, restore ecological status and protect biodiversity.

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 require public authorities to have regard to River Basin Management Plans and to act consistently with the protection and restoration of water bodies.

The Environmental Targets (Water) (England) Regulations 2022 set legally binding water quality targets, including the restoration of 75% of water bodies to good ecological status. The Office for Environmental Protection has reported that Defra is not on track to meet these targets.

The Levelling-up and Regeneration Act 2023 also strengthened the duty on relevant authorities in relation to National Parks and National Landscapes. Public bodies must seek to further the statutory purposes of these protected landscapes.

The continued authorisation and general sale of fipronil and imidacloprid products without adequate environmental assessment, monitoring or restriction appears inconsistent with these duties.

9. The VMD call for evidence

Defra and the VMD have recently held a call for evidence on flea and tick treatments containing fipronil and imidacloprid. The Society welcomes scrutiny of this issue, but we are concerned that the framing of the call for evidence understates the certainty and seriousness of the existing evidence.

The question is not whether these chemicals might be entering waterways as it is already known that they are. Nor is the question whether they might be harmful to aquatic invertebrates as it is known that they are highly toxic to aquatic invertebrates and are being found at levels exceeding ecological thresholds.

Further research may refine understanding of pathways and impacts, but lack of complete certainty should not be used to defer action. The precautionary principle requires intervention where there is credible evidence of significant environmental harm. That threshold has been met.

10. Recommendations

We ask the Committee to recommend that government and the VMD take the following steps.

- all veterinary products containing fipronil or imidacloprid should be reclassified so that they are no longer available on general sale. They should be supplied only under appropriate professional control, with veterinary advice at the point of prescription or supply.
- blanket prophylactic treatment should end. Treatment should be based on risk, diagnosis, seasonality, animal lifestyle and local parasite prevalence.
- comprehensive environmental risk assessments should be required for all companion animal parasiticides, including existing products. These assessments must include down-the-drain pathways, cumulative use, domestic exposure routes, metabolites and ecologically representative freshwater species.
- Environmental Quality Standards should be established for fipronil, fipronil metabolites and imidacloprid in freshwater.
- routine monitoring of veterinary medicine residues in rivers, streams, wastewater effluent, sediments and protected landscapes should be required.
- the VMD should publish a clear timetable for regulatory reform.
- consumer information should be strengthened immediately. Pet owners should be told that these products are toxic to aquatic life, that treated pets should not be washed or allowed to swim shortly after application, and that routine treatment should not be used unless needed.

Conclusion

The evidence before the Committee shows a clear pattern: highly toxic chemicals, restricted in agriculture because of environmental harm, remain widely used on pets; they enter the water environment through domestic wastewater pathways; wastewater treatment does not remove them; and they are being detected in rivers at levels capable of harming freshwater invertebrates and wider ecosystems.

This is a regulatory failure. It is particularly serious in protected landscapes such as Exmoor, where small rivers and streams are central to biodiversity, landscape character and public trust in environmental protection.

The Exmoor Society asks the Committee to recommend urgent, precautionary and enforceable action to reduce the environmental load of fipronil and imidacloprid from pet parasiticides while preserving necessary, risk-based treatment for animal and human health.

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29.6.26

