

SUBMISSION OF EVIDENCE TO THE OFFICE FOR ENVIRONMENTAL PROTECTION

Complaint Regarding the Veterinary Medicines Directorate's Failure to Regulate

the Environmental Impact of Fipronil and Imidacloprid in Veterinary Parasiticides

Submitted: June 11th 2026

Prior Complaint Process: Confirmation of Eligibility to Submit

The OEP requires complainants to have first exhausted the complaints process with the relevant public authority before a submission can be considered. This requirement has been met. The following is a summary of the complaint process undertaken by **Jeff Gill**, an environmentalist who has been working collaboratively with The Exmoor Society on the issue of regulatory failure in relation to veterinary parasiticide contamination of freshwater. The full correspondence is available in appendix 2.

Chronology of complaint

- **29 December 2025:** Initial complaint submitted to the OEP, received and acknowledged.
- **12 January 2026:** OEP response confirming that the complaint could not proceed until the process with Defra/VMD had been exhausted.
- **17 January 2026:** Formal complaint submitted to Defra by email, with two subsequent reminders. As the VMD is the relevant Defra executive agency for this matter, the complaint was handled by the VMD.
- **29 January 2026:** Formal complaint submitted directly to the VMD by email.
- **12 February 2026:** VMD response received. The response was considered unsatisfactory in that it did not address the substance of the complaint regarding failure to meet legally binding environmental obligations.
- **17 February 2026:** Reply to VMD requesting an internal review.
- **19 March 2026:** Partial internal review response from VMD Business Compliance (Mike Griffiths, COO), addressing a specific point about down-the-drain emissions from handwashing. The response was considered inadequate and legally challengeable.
- **31 March 2026:** Full outcome of VMD internal review received. The review did not result in any commitment to regulatory action, and the VMD's position was considered an unsatisfactory response to the substance of the complaint. The internal complaints process with Defra and the VMD has therefore been fully exhausted, and this submission to the OEP follows as the next appropriate step.

Sources of Evidence

This submission draws on two primary sources of evidence:

Source 1: Bourne-Taylor, H. (2026). [The effects of veterinary tick and flea treatments on freshwater invertebrates and ecosystems](#). Buglife – The Invertebrate Conservation Trust, Peterborough, UK. A comprehensive desktop study based on 166 documents including 131 peer-reviewed scientific papers.

Source 2: All-Party Parliamentary Group (APPG) on Bees and Pollinators, Spring 2025 Report, pages 28–30. This parliamentary document presents evidence given to MPs regarding pesticide contamination from veterinary medicines, including testimony on the regulatory gap at the Veterinary Medicines Directorate (VMD).

1. Nature of the Complaint

We submit this evidence to register a formal complaint that the Veterinary Medicines Directorate (VMD) has failed in its duty to assess, monitor, and regulate the environmental impact of veterinary parasiticide products containing fipronil and imidacloprid, two pesticides that are banned for outdoor agricultural use in the UK precisely because of their toxicity to non-target species and ecosystems.

The VMD's current regulatory framework, the Veterinary Medicines Regulations Act 2013, does not require a comprehensive environmental risk assessment for companion animal parasiticides. Down-the-drain emissions are not considered, and the VMD has taken no meaningful restrictive action despite overwhelming scientific evidence of harm to freshwater ecosystems.

2. Scale and Severity of Contamination in UK Waterways

The evidence of widespread contamination of UK freshwater with fipronil and imidacloprid, sourced primarily from veterinary flea and tick treatments, is extensive and unambiguous:

- A study of 20 English waterways (Environment Agency data, 2016–2018) found fipronil detected in 98.6% of samples and imidacloprid in 65.9%. Mean concentrations of fipronil and fipronil sulfone were 5.3 and 38.1 times their chronic toxicity limits respectively ([Perkins et al., 2021](#)).
- In 2022, fipronil was ranked the single worst organic substance detected in surface waters across England out of 1,114 chemicals assessed, found in over 75% of samples ([Spurgeon et al., 2022](#)).
- In 2023, imidacloprid was ranked as the contaminant posing maximum risk across the entire Greater London catchment ([Egli et al., 2023](#)).
- A 2021–2023 survey of nine Welsh rivers found imidacloprid in 77% of samples and fipronil in 44%, with detection odds rising 26-fold and 8-fold respectively in urban sites. Concentrations exceeded Predicted No Effect Concentrations (PNECs) in 38–44% of urban samples (Hadley, M. et al., 2026).
- The National Chemical Investigations Programme (UKWIR CIP3, 2020–2022) found fipronil and imidacloprid among only seven out of 32 chemicals of emerging concern that exceeded PNEC values across all sample locations ([UK WIR, 2023](#)).
- 100% of effluent samples at 29 out of 30 wastewater treatment sites tested contained imidacloprid ([Perkins et al., 2024](#)). Wastewater treatment plants do not remove these chemicals, making them a primary route of environmental entry.

3. Evidence of Ecological Harm

The ecological damage caused by these chemicals to freshwater invertebrates and wider ecosystems is documented across thousands of peer-reviewed studies:

- Imidacloprid reduces survival, feeding, growth, and reproduction in mayflies (Ephemeroptera), stoneflies (Plecoptera), midges (Diptera), dragonflies and damselflies (Odonata), and freshwater shrimps (Amphipoda). Environmental concentrations as low as 0.03 µg/L have been shown to cause mayfly death ([Roessink et al., 2013](#)).

- A study of rivers in Wales showed over 90% decline in the abundance of key invertebrate families including Heptageniidae and Limnephilidae – with increasing concentrations of imidacloprid near contaminated surface drains (Hadley, M. et al., 2026).
- Dutch national-level data found that imidacloprid pollution at just 0.02 µg/L was associated with a 30% decline in bird populations over ten years, via food web collapse ([Hallmann et al., 2014](#)).
- Fipronil impairs growth, emergence, and behaviour in freshwater midges at environmentally realistic concentrations, and its breakdown metabolites (fiproles) are often more toxic and persistent than the parent compound ([Monteiro et al., 2019](#)).
- Both chemicals have been linked to 'forever chemicals': fipronil contains PFAS (per- and poly-fluoroalkyl substances) and imidacloprid contains PFOS (perfluorooctane sulfonate), raising long-term persistence concerns (Natural England; [Donley et al., 2024](#); [Lasee et al., 2022](#)).

4. Specific Failures of the VMD

The following regulatory failures by the VMD constitute a failure to comply with environmental protection law:

4.1 No Environmental Quality Standards (EQS) established

The four UK environment agencies have not established Environmental Quality Standards for either fipronil or imidacloprid, despite both being ranked among the most hazardous substances in UK freshwater. The EU's scientific advisory body endorsed proposed EQS values for imidacloprid in 2021, and fipronil was added to the EU Water Framework Directive watch list in 2022, a mechanism for gathering data ahead of potential EQS designation. The UK has Fipronil on its equivalent watch list, but no established EQS for either chemical and therefore cannot monitor them.

4.2 Environmental risk assessment framework is inadequate

Under the current VICH two-tier framework used by the VMD, veterinary medicines for non-food animals are assumed to pose low environmental risk, exempting most companion animal products from detailed Phase II environmental assessment. Risk assessments use the water flea *Daphnia magna* as the standard test organism a species found to be up to 1,000 times less sensitive to imidacloprid than other freshwater invertebrates ([Morrissey et al., 2015](#)), systematically underestimating harm.

4.3 Down-the-drain pathways not considered

The VMD's framework does not account for down-the-drain exposure routes. Research confirms that 100% of wash-off samples from dogs treated with these compounds contained fipronil and imidacloprid ([Perkins et al., 2024](#)). An estimated 9.1% of applied imidacloprid and 6.0% of fipronil passes into waterways via household drains alone. Pet bathing, bedding washing, and handwashing are all significant but unregulated exposure pathways.

4.4 No monitoring requirement for veterinary medicines in waterways

Pesticides used in veterinary medicines are not routinely monitored or assessed by government regulators. In 2021, only 40% of routine water samples collected across England were even tested for imidacloprid yet over half of those had detectable levels ([Freshwater Biological Association, 2024](#)). The VMD has not acted to close this gap.

4.5 Inconsistency with agricultural bans not addressed

Imidacloprid was banned for outdoor agricultural use in 2018 and fipronil's agricultural approval ended in 2017 both due to documented harm to non-target species. The government's December 2024 commitment to ending neonicotinoid use does not apply to imidacloprid when used in veterinary products, creating an explicit and unjustifiable regulatory inconsistency.

4.6 Failure to comply with the Water Framework Directive Regulations 2017 and the Environment Act 2021

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 ('the WFD Regulations') remain in force as retained UK law. They place a legally binding duty on public authorities to protect and restore water bodies to good ecological status and, critically, to prevent any deterioration in the status of water bodies. This no-deterioration principle is not aspirational; it is a legal obligation. Under Regulation 33 of the WFD Regulations, all relevant public authorities, including the VMD, have a duty to have regard to River Basin Management Plans in the exercise of their functions.

The Environmental Targets (Water) (England) Regulations 2022, made under the Environment Act 2021, further strengthened these obligations by setting four legally binding water quality targets, including a commitment to restore 75% of water bodies to good ecological status. The OEP has itself reported that Defra is not on track to meet these targets. The current government has acknowledged this. Fipronil and imidacloprid, both rated as highly toxic to aquatic life and found at harmful concentrations in the majority of monitored English rivers, are a direct and identified contributor to this failure.

The VMD, whose authorisation and classification decisions directly determine the scale of parasiticide use and the consequent chemical load entering waterways, has not exercised its functions in a manner consistent with these duties. By maintaining a general sales classification for fipronil and imidacloprid products, declining to restrict their use, and failing to require meaningful environmental risk assessment, the VMD has actively contributed to the continued deterioration of water body status in breach of its obligations under both the WFD Regulations 2017 and the Environment Act 2021.

4.7 Failure to protect National Park waterways under the Levelling-up and Regeneration Act 2023

The VMD's failure to regulate the contamination of waterways by fipronil and imidacloprid from veterinary parasiticides may therefore constitute a failure to comply with this statutory duty. These chemicals are present in waterways across England at concentrations exceeding chronic toxicity limits, including in catchments that flow through or feed into protected landscapes. The VMD, as a relevant authority whose regulatory decisions directly determine the scale of chemical discharge into these environments, has taken no steps to assess or mitigate the impact of parasiticide contamination on National Park water bodies. This omission may represent a breach of the section 245 duty, and we ask the OEP to consider this legislative dimension as part of its investigation.

4.8 The Defra/VMD call for evidence as evidence of evasion rather than action

Defra and the VMD have announced a call for evidence to review whether veterinary medicines containing fipronil and imidacloprid should continue to be sold without professional advice. The stated basis for this review is that these chemicals "may" contribute to the contamination of watercourses. We submit that this framing is itself evidence of regulatory failure.

The contamination of UK waterways by these chemicals is not a matter of possibility or conjecture; it is empirically established by the VMD's own monitoring data and by over a decade of peer-reviewed scientific research, including the studies cited throughout this submission. Fipronil was ranked the single worst organic substance in English surface waters in 2022 (Spurgeon et al., 2022). Imidacloprid exceeded safe thresholds in 52% of Environment Agency monitoring cases (Grantham Institute, 2023). A call for evidence that characterises this as a matter of uncertainty misrepresents the state of the science and, we submit, is designed to defer action rather than inform it.

The precautionary principle, which is embedded in UK environmental law, requires that regulatory action is taken where credible evidence of significant harm exists; it does not require absolute certainty. The VMD already possesses more than sufficient evidence to act.

We ask the OEP to consider whether the use of a call for evidence, in circumstances where the scientific case is already made, constitutes a further failure to comply with the VMD's environmental obligations and whether it represents an attempt to substitute process for the substantive regulatory action that the law requires.

5. What We Ask the OEP to Do

We ask the Office for Environmental Protection to investigate whether the VMD has failed to comply with environmental law, specifically in relation to:

- Its obligations under the Veterinary Medicines Regulations 2013 to require adequate environmental risk assessment of companion animal parasiticides.
- Its duty under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and the Environmental Targets (Water) (England) Regulations 2022 (made under the Environment Act 2021) to prevent deterioration of water body status and to pursue legally binding water quality targets. These are duties which the VMD's failure to regulate parasiticide contamination has actively undermined.
- The requirement to apply the precautionary principle where evidence of significant ecological harm exists.
- Consistency with the UK's obligations under international environmental agreements and domestic biodiversity commitments.
- Its duty under section 245 of the Levelling-up and Regeneration Act 2023 to further the conservation and enhancement of National Parks and AONBs, given that unregulated parasiticide contamination of waterways in and around protected landscapes may constitute a breach of that statutory obligation.

We further ask the OEP to use its powers to require the VMD to:

- Classify all fipronil- and imidacloprid-containing veterinary products as Prescription Only Medicines (POM-V), so that qualified vets control access and usage.
- Require comprehensive environmental risk assessments for all companion animal parasiticides, using ecologically representative test species.
- Establish Environmental Quality Standards for fipronil and imidacloprid in freshwater environments.
- Mandate the monitoring of veterinary medicine chemicals in waterways on a routine basis.
- End blanket prophylactic prescribing approaches and mandate risk-based treatment decisions by vets.

The scientific evidence presented here is unambiguous. UK freshwater ecosystems are being contaminated with banned agricultural pesticides via an unregulated route. The VMD's inaction represents a significant failure of environmental governance that falls within the OEP's mandate to investigate. We further ask the OEP to scrutinise whether the recently announced call for evidence that is framed around whether these chemicals "may" contaminate watercourses, when that contamination is already proved, constitutes a lawful discharge of the VMD's regulatory duties, or whether it represents a procedural device to avoid the substantive action that the evidence demands.