PET OWNERSHIP AND COMMUNICATIONS IN THE UK

RESEARCH FOR LUND TRUST

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Summary

This report looks at the environmental and public health impacts of pet ownership in the UK, focusing on how these issues can be better communicated to pet owners. Using premium pet food production and pet parasiticide use as case studies, it identifies the major actors involved in communicating these issues and assesses how different messages are being used to drive behaviour change among pet owners. The report concludes with recommendations for Lund Trust on supporting campaigns, collaborations, and outreach initiatives that encourage responsible pet ownership.

Introduction

Pet ownership is typically understood as the keeping of animals for companionship in a domestic setting, as distinguished from wild, farm, or laboratory animals (APGAW, n.d.). Globally, pet ownership has grown substantially in recent decades, with particularly strong increases in the United Kingdom. According to the PDSA Animal Wellbeing Report (2024), the number of dogs in the UK has increased from 8.2 million in 2011 to 10.6 million in 2024, while the cat population has remained relatively stable at around 11 million. These figures reveal both the widespread prevalence of pet ownership and its growing social significance in the UK.

This social significance carries wide-ranging environmental and public health implications. On the positive side, companion animals provide well-documented benefits for human health and wellbeing: they can help reduce stress and anxiety, increase physical activity, and give pet parents a sense of purpose (UC Davis Health 2024). Yet these benefits coexist with a range of environmental and public health risks. Pets contribute to climate change, land overuse, and plastic pollution through their food, accessories, and waste. They can also pose risks to human health, such as zoonotic disease transmission and allergic reactions. It is therefore necessary to treat pet ownership as an environmental and public health issue that warrants greater public attention.

Despite these concerns, the pet sector has received less scrutiny than other consumer industries, even as it continues to grow at a remarkable pace. S&P Global reports that private equity and venture capital investments in pet care, food, and supplies rose by 659% in 2023 (Imtiaz and Sabater 2024). The boom in animal ownership during the Covid-19 pandemic also resulted in unprecedented growth for pet food manufacturers, including major players such as Mars and Nestlé (BBC News 2021). At the same time, rapid economic expansion amplifies environmental and health pressures, particularly through meat-based pet food production and the widespread use of chemical-based parasite treatments. These pressures are further intensified by aggressive marketing practices, upselling of unnecessary products, and the growing premiumisation of pet care, all of which increase both consumption and environmental burden.

Complicating this issue further is the emotional connection that human owners have with their pets. Although the legal and policy term for pets is 'companion animals', in practice, the nature of human–animal relationships are highly varied. Emotional attachments and modes of interaction differ across species, from cats and dogs to horses, small mammals, ornamental fish, and caged birds. For many, pets are considered intimate family members (Accent 2025), and discussions around their care can trigger strong emotions and polarised views. In all cases, these attachments complicate communication around responsible ownership. Owners may resist messages that appear to compromise animal welfare or weaken their bond with their pets, even if the aim is to reduce environmental and public health risks.

This report argues that addressing these challenges requires more effective communication strategies. Raising awareness of environmental and public health risks associated with pet ownership requires careful framing, tailored to the values and sensitivities of pet owners while remaining evidence-based. A diverse range of actors and stakeholders play a role in this communication landscape: policymakers and regulators,

scientific researchers, industry bodies, veterinary professionals, charities, pet supply companies, local authorities, and the media. Mapping how these groups currently frame the issue and identifying opportunities for more effective communication with pet owners form the foundation for this study.

The report is structured as follows: Chapter One introduces the scope of the problem, outlining the environmental and public health impacts of pet ownership in the UK and justifying the selection of two focal cases – premium pet food production and pet parasiticide use. Chapter Two examines who is communicating about these issues, and what stances and narratives dominate. Chapter Three compares communication contexts and strategies across the two cases and assesses how different messages are being used to drive behaviour change among pet owners. The report concludes with recommendations for Lund Trust and reflections on broader implications for environmental and health communication.

Methodology

This study is based primarily on desk research and literature review. It identifies the major environmental and public health impacts of pet ownership in the UK and examines current efforts to address these challenges. To ground the analysis, two case studies were selected: premium pet food production and pet parasiticide use. These cases were chosen because they represent significant yet undercommunicated pathways through which pet ownership affects environmental and public health. This research also involved reviewing communication materials produced by key stakeholders (including government bodies, veterinary associations, NGOs, industry actors, and the media) to assess how risks and responsibilities of pet ownership are framed. This approach enables an assessment of whether existing communication strategies are effective, equitable, and evidence-based.

1. The environmental and public health impacts of pet ownership in the UK

This chapter provides an overview of the environmental and public health impacts of pet ownership in the UK. It also examines in detail the impacts of premium pet food production and pet parasiticide use, offering essential context for campaigning and advocacy work in this field.

1.1 Overview of major environmental and public health impacts

Pet ownership generates a wide range of environmental pressures, many of which parallel those associated with human consumption. One of the most significant drivers is the production of meat-based pet food, which requires intensive use of land, water, and energy while producing considerable greenhouse gas emissions (Alexander et al. 2020; Martens et al. 2019).

Companion animals also exert ecological impacts beyond their diets. Dogs off-leash in sensitive habitats can disturb ground-nesting birds and other wildlife (Forestry Commission 2025), while cats contribute to predation pressures on small mammals and songbirds (Kosicki 2021). In urban and rural landscapes, pets can accelerate bank erosion (Bushell 2022) and waterway degradation (Perkins et al. 2024). Faecal waste is also a serious hazard, containing microorganisms that may be pathogenic to both humans and animals. Nitrogen in faeces, for example, can fuel invasive algal blooms that suffocate aquatic life (Judge 2025).

Waste generation extends to the growing volume of pet products, from toys and bedding to grooming items, poop bags, and accessories. Much of this material is non-recyclable plastic, adding to household waste streams and landfill pressures (Nijhof 2019). Cat litter brings its own environmental costs, as clay-based products are non-biodegradable, end up in landfills,

and are sourced through strip mining which destroys vegetation and topsoil (Han 2023).

Beyond their environmental footprint, pets can also pose human health risks. They can act as vectors for zoonotic diseases (Stull, Brophy, and Weese 2015), contribute to antimicrobial resistance through veterinary medicine use (VMD 2025), and trigger allergic reactions or cause injuries in humans (Yin, Morris, and Williams 2023).

1.2 Justification for the selection of cases

Two cases have been chosen for deeper investigation: (1) the impacts of premium pet food production on greenhouse gas (GHG) emissions and agricultural land use, and (2) the impacts of parasiticide use on waterway pollution and biodiversity loss. These issues are selected because they exemplify broader patterns of unsustainable practice within pet ownership while offering concrete entry points for communication and intervention.

1.2.1 The impacts of premium pet food production on greenhouse gas (GHG) emissions and agricultural land use

Providing a suitable diet is a legal responsibility under the UK Animal Welfare Act 2006, which requires owners to feed their animals in line with their life stage and health needs to prevent obesity and malnourishment (DEFRA and APHA 2024). In practice, however, pet feeding habits have shifted markedly in recent years with the humanisation of pets and the premiumisation of pet food, trends often associated with negative consequences for both animal welfare and the environment. Manufactured to the same standards as ready-to-eat human food, premium pet food is marketed as human-grade and often contains higher proportions of meat. As Alexander and Moran (2023) note, this trend is particularly strong in North America, Western Europe, and Australasia, and carries considerable environmental implications because meat-heavy foods demand far more land, water, and energy to produce. The issue is

particularly significant given the diets of dogs and cats, which are far more meat-dependent than those of small herbivorous pets like rabbits or rodents. Katkin, a premium cat food company, exemplifies this trend of humanisation with slogans such as ‘meat so good you can eat it yourself’ (Katkin n.d.). Consequently, dogs and cats account for the bulk of the Ecological Paw Print (EPP) of pet ownership (Martens et al. 2019). As Figure 1 illustrates, premium dog and cat foods generate far greater GHG emissions and agricultural land use compared with non-premium formulations.

Awareness of these impacts remains uneven. While many dog and cat owners underestimate the environmental and health consequences of feeding choices, rabbit owners tend to report greater confidence in their knowledge of nutrition, likely reflecting targeted initiatives such as Rabbit Awareness Week (PDSA 2022). This points to the role of communication in shaping owner understanding and practice.

The challenges around pet feeding mirror wider debates in human diets. Just as plant-based diets are promoted as essential to planetary health and sustainable agriculture (Clark and Tilman 2017; Willett et al. 2019), pet food markets are beginning to diversify into alternative proteins such as insect-based, cultured meat, and algae-derived products. Yet these remain niche and are often overshadowed by the strong consumer appetite for meat-heavy premium diets. As Alexander and Moran (2023) argue, a tension has emerged between the consumer demand for premiumisation and the growing calls to reduce environmental impact. This tension underscores the importance of effective communication: how dietary advice is framed, how the industry markets its products, and how veterinary professionals guide owners all shape the environmental footprint of companion animal feeding.

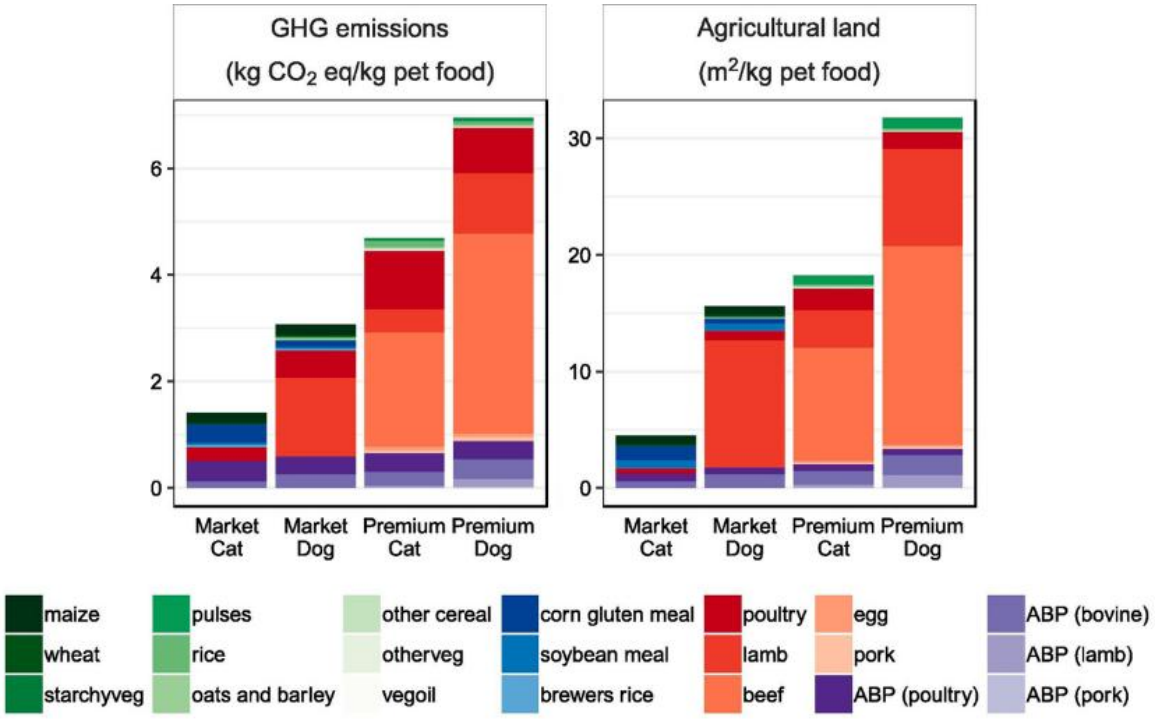

Figure 1. Rate of environmental paw print (e.g. GHG emissions and agricultural land use) per kg of by pet food type (adapted from Alexander et al. 2020)

1.2.2 The impacts of pet parasiticides on waterway pollution and biodiversity loss

Pet parasiticides are veterinary medicines designed to prevent or treat parasites such as fleas, ticks, and worms. They come in various forms, including topical products and collars that often contain pesticide active substances such as fipronil and imidacloprid. While outdoor agricultural use of imidacloprid has been banned since 2018 and all agricultural use of fipronil since 2017 in the EU and UK (Perkins et al., 2024), these chemicals continue to be widely applied in domestic pet parasiticides to protect animal health. Growing evidence highlights their unintended environmental consequences, particularly in the UK, where studies have documented their role in pesticide contamination of waterways (Perkins et al. 2021; Wells and Collins 2022). Distribution maps in figure 2 indicate how

concentrations of fipronil and imidacloprid in English rivers reach levels potentially harmful to aquatic life.

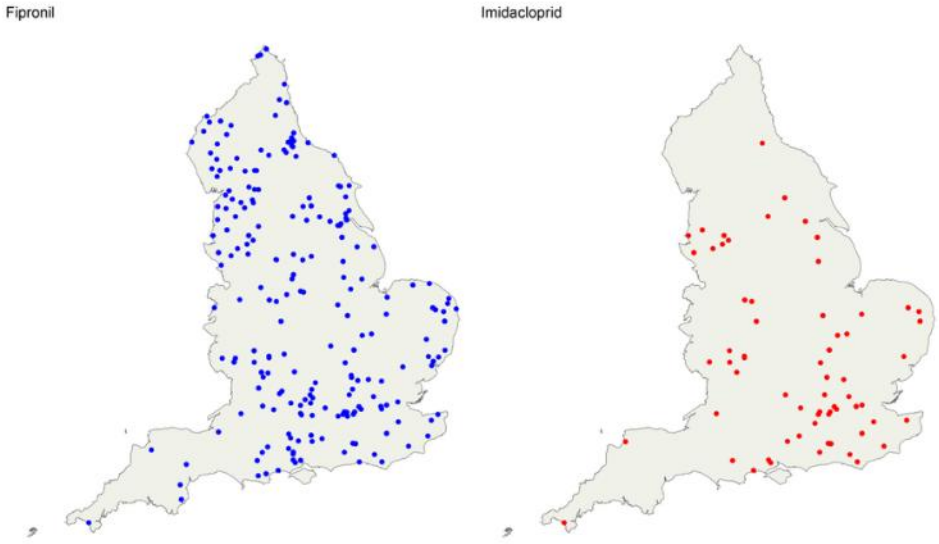

Figure 2. Distribution of fipronil (blue) and imidacloprid (red) at potentially harmful concentrations in rivers across England (Freshwater Biological Association 2024)

The scale and pathways of environmental exposure from veterinary parasiticides are considerable. While locally acting spot-on products initially dominated the market (Beugnet and Franc, 2012), the range and availability of veterinary parasiticides (including topical treatments and collars) have expanded significantly in recent years (EMA 2023). Once applied, the chemicals they contain can enter aquatic and terrestrial ecosystems through multiple routes: bathing pets, washing pet bedding, allowing treated animals to swim in rivers, excretion of urine and faeces, and the use of dog hair in bird nests (Dyk et al. 2012). In the environment, these substances are toxic to non-target species, including aquatic invertebrates (e.g. crustaceans), pollinators (e.g. bees), and soil-dwelling organisms (e.g. springtails) (Little and Boxall, 2020; Diepens et al., 2023). Figure 3 illustrates the scale of these ecological impacts and how multiple exposure pathways can threaten fish, birds, and other wildlife.

Parasiticides also carry potential health implications for pets and humans. Even when administered correctly, the long-term effects of repeated parasiticide use on pets remain poorly communicated, and misuse, such as incorrect dosing relative to weight or age, can result in adverse outcomes (BSAVA 2025). Human exposure is also a concern, as many pets treated with external flea and tick products share living spaces with their owners (BSAVA 2025). Active substances like fipronil have been linked to cancer and are suspected endocrine disruptors, potentially affecting hormone systems (Little and Boxall 2020).

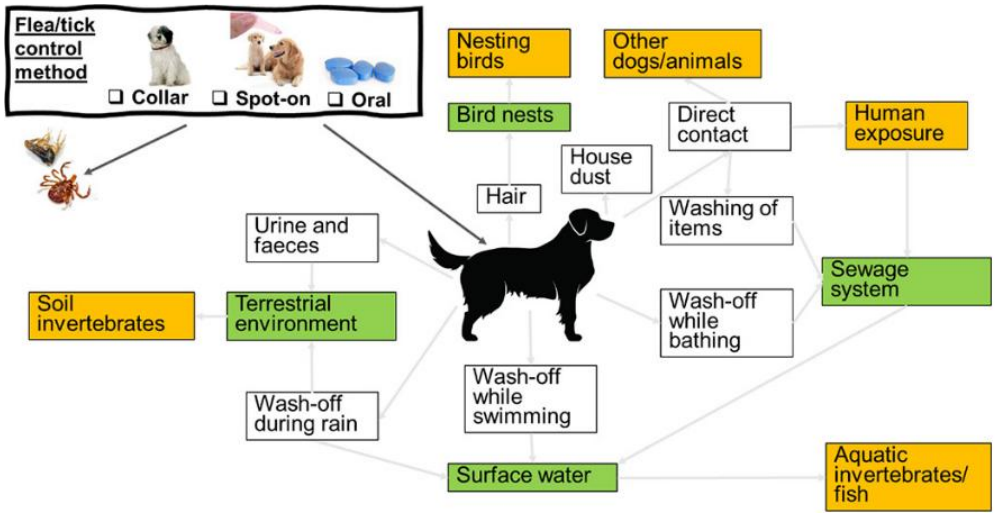

Figure 3. Environmental contamination and impact of parasiticides used in pets (Diepens et al. 2023)

2. Mapping the communication landscape in pet ownership

This chapter provides an overview of the communication ecosystem surrounding the environmental and public health impacts of pet ownership, focusing on the premiumisation of pet food and the use of veterinary pesticides. It identifies the principal actors involved in communicating these impacts, analyses how they engage with pet owners, and critically assesses the strengths, weaknesses, and gaps in existing messaging.

2.1 An owner-focused communication landscape

Figure 4 presents an owner-focused view of the key actors discussed in this section. It illustrates a two-tier structure based on each actor's outreach (i.e. ability to bring information to individual pet owners who may not otherwise be aware of them) and accessibility (i.e. availability for individual pet owners to use the information regardless of their abilities). At the first tier are primary sources of information including: (1) research, surveys, and databases produced by academic institutions and independent organisations; (2) policy, legislation, and guidelines released by government agencies and regulatory bodies; and (3) professional statements and industry guidance issued by expert associations. These sources provide authoritative and credible information, but they tend to have limited outreach or accessibility to individual pet owners.

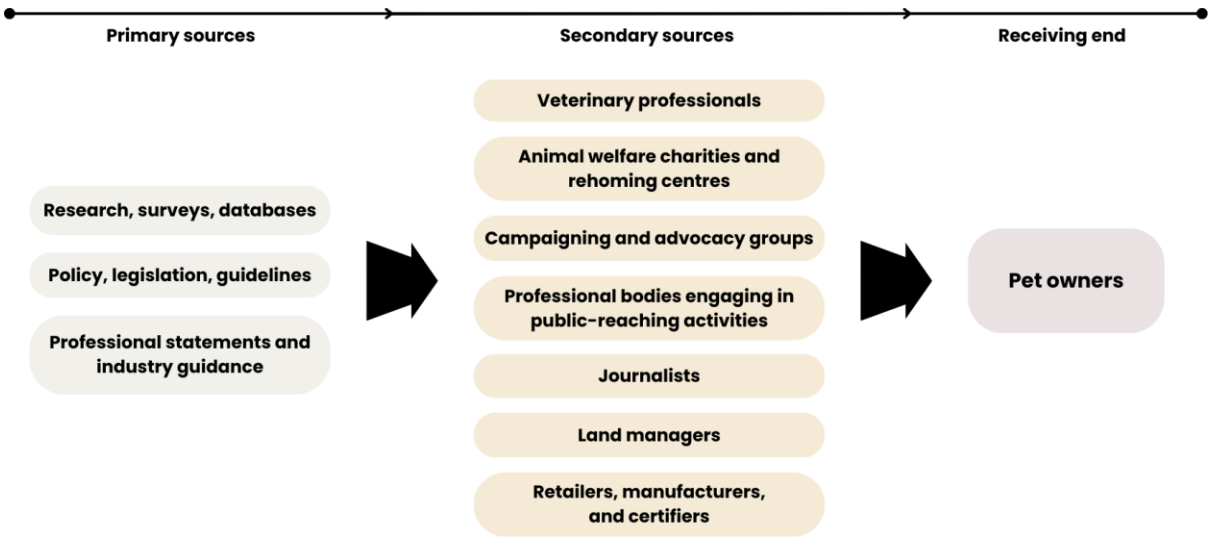

Figure 4. Key communication actors based on their outreach and accessibility to pet owners.

The second tier includes the communicators who make this expert information more accessible and actionable for the public. These include: (1) veterinary professionals; (2) animal welfare charities and rehoming centres; (3) campaigning and advocacy groups; (4) professional bodies engaged in public-reaching activities; (5) journalism; (6) land managers; and (7) retailers, manufacturers, and certifiers, among others. These actors vary in their credibility, reach, and style of engagement, but collectively they form a public-facing layer of communication with the potential to shape pet owner awareness and decision-making.

2.2 Key information sources and their positions

At the top tier of the communication landscape around pets, the environment, and public health are information sources from science, policy, and industry. This section outlines the roles of these key players and the nature of their contributions.

2.2.1 Research, surveys, and databases

Research institutions and independent scientific organisations form the evidence base for understanding the environmental and health impacts of pet ownership. Although the environmental impacts of pesticides on aquatic ecosystems have long been studied, a focused scientific discourse on pet parasiticides in the UK only began to emerge in recent years. Key areas of research include: the role of veterinary parasiticides in the contamination of English rivers (Perkins et al. 2021; Ramage et al. 2025); exposure pathways and environmental spread of insecticides such as fipronil (Dyk et al. 2012; Teerlink 2017; Diepens et al. 2023; Perkins and Goulson 2023); and general assessments of environmental risks from pet parasite treatments (Little and Boxall 2020; Wells and Collins 2022). These findings are primarily published in academic journals, which limits their reach to lay audiences.

Nevertheless, this growing body of research has begun to inform more publicly accessible materials such as briefing notes and information sheets. For example, Imperial College London's Grantham Institute produced a briefing note explaining the impacts of pet parasiticides on urban ecosystems (Preston-Allen et al. 2023), reflecting an interdisciplinary approach that bridges environmental science with public communication. The Freshwater Biological Association – an independent organisation dedicated to freshwater science and conservation – published an information sheet warning of the potential harm pet treatments pose to freshwater life (Freshwater Biological Association 2024). Co-authored by scientists based in leading universities and research institutions in the UK, these contributions often include evidence-based recommendations of pet owner actions such as treating pets on a reactive-only basis, consulting with vets before treatment, avoiding topical treatments for dogs that swim or are bathed regularly, and proper disposal of pet waste and packaging. These materials represent a step toward making scientific research more readable and accessible to non-specialists, though their broader public reach remains uncertain. There is some evidence of their uptake: Imperial College's research was cited in the British Veterinary

Association's call for further research on environmental impacts of parasiticides, encouraging members to use these medicines responsibly (BVA, 2023). Similarly, the National Office of Animal Health (NOAH) has referenced this research in its position statements, welcoming the comprehensive evidence while promoting responsible product use (NOAH, n.d.). Wildlife charities, such as Froglife, have also drawn on these studies to produce accessible articles on the effects of flea treatments on aquatic life (Leighton, 2023). Collectively, these examples demonstrate how primary research can be translated into materials that reach veterinarians, industry actors, charities, and the interested public, even if full engagement with pet owners remains limited.

Research on pet food production has highlighted environmental impacts linked to consumer behaviour. Studies have shown that the ongoing 'premiumisation' of pet food – shifting toward high-cost, human-grade ingredients – drives increased greenhouse gas emissions and agricultural land use (Euromonitor 2019b; Alexander et al. 2020). Researchers have also drawn connections between the 'humanisation' of pets and negative health outcomes for pets, including obesity (Carter et al., 2014; Swanson et al. 2013), suggesting that owner behaviour and attitudes toward food may be part of the problem. These findings suggest that owner preferences and feeding practices play a central role in shaping both environmental impacts and pet health. In response, researchers have argued for pet feeding to be considered as part of broader food system sustainability debates (Alexander et al. 2020). Supporting this view, the Smart Protein Project, funded by the EU's Horizon 2020 programme, explores sustainable protein sources (such as legumes and fungi) for human consumption. Although primarily focused on human diets, the project also provides insights into pet feeding trends and highlights the 'like owner, like pet' effect: for example, vegan pet owners are significantly more likely to feed their pets a plant-based diet (Smart Protein Project 2021), reinforcing the influence of human dietary choices on pet food consumption patterns.

Other information resources include the BSAVA (British Small Animal Veterinary Association) Library, which offers a broad range of reference materials and clinical guidance for veterinary professionals. However, like most of the sources in this tier, its primary audience is professionals and so it does not directly support behaviour change among pet owners.

2.2.2 Policy, legislation, and guidelines

In the UK, the Department for Environment, Food and Rural Affairs (Defra) and the Animal and Plant Health Agency (APHA) provide legal and policy frameworks that define acceptable practices in pet welfare and health. Grounded in the Animal Welfare Act 2006, these frameworks emphasise the pet owner's responsibility to meet the five welfare needs of pets, including protection from disease and appropriate feeding to prevent malnourishment and obesity (Defra and APHA 2024). These bodies frame pet diets primarily through the lens of pet health and welfare, with minimal reference to environmental and human health.

The regulatory oversight of parasiticide treatments for pets brings environmental concerns into sharper focus. The European Medicines Agency (EMA) is a leading voice in identifying environmental risks of veterinary parasiticides. In 2023, EMA issued a reflection paper calling for: (1) improved environmental risk assessment procedures for ectoparasiticides used in cats and dogs; (2) greater awareness among veterinarians, pet owners, pet supply sellers, pharmacists, pet associations and shelters about the environmental hazards of these products; (3) clear product labelling and use instructions to reduce contamination of waterways, such as advising against bathing pets or allowing them to swim in watercourses after the application of topical treatments. (EMA 2023)

Although the UK has left the EU, the Veterinary Medicines Directorate (VMD) continues to draw on EMA guidance to strengthen its own environmental oversight. As a government agency that regulates veterinary medicines,

VMD is responsible for ensuring that veterinary medicines are safe for animals, humans, and the environment. As of 22 July 2025, the VMD published a roadmap of action plans developed under the Cross-Government Pharmaceuticals in the Environment (PiE) Group[1]. That document specifically addresses the detection of fipronil and imidacloprid in UK waterways. These chemicals are found in widely used 'spot-on' treatments and collars for cats and dogs. A key priority outlined in the roadmap is the VMD's collaboration with veterinary professionals and industry to improve communication around responsible use, with the goal of reducing environmental harm (VMD and Defra 2025). Notably, VMD regulations currently assume minimal environmental exposure from pet-use parasiticides (unlike treatments for livestock, which are subject to full environmental safety testing). This regulatory gap leaves significant blind spots in assessing the environmental and public health consequences of widespread pet parasite control (Preston-Allen et al. 2023).

For pet diets, the UK follows standards set by the European Pet Food Industry Federation (FEDIAF). FEDIAF produces nutritional guidelines for pet food manufacturers in the UK, outlining the dietary needs of cats and dogs across life stages. These are regularly updated based on the latest nutritional science and reviewed by experts in Europe and the US. In addition, FEDIAF provides manufacturing guidelines to ensure food safety and hygiene standards during pet food production.

While regulatory authorities can mandate changes, their primary communication tools (such as policy papers, guidelines, and regulatory statements) are not designed for direct engagement with pet owners. These materials often only reach the public indirectly, through veterinary professionals, campaigns, or media coverage. As a result, their influence

[1] Formed in 2023, the Cross-government Pharmaceuticals in the Environment (PiE) Group is a UK platform for developing coordinated strategy to reduce the biodiversity and human health impacts of pharmaceuticals. Current membership includes Veterinary Medicines Directorate (VMD), Environment Agency (EA), Health and Safety Executive (HSE), Veterinary Products Committee (VPC), Department for Environment, Food and Rural Affairs (Defra), and Medicines & Healthcare products Regulatory Agency (MHRA).]

on owner behaviour depends heavily on second-tier communicators who translate policy into more accessible formats.

2.2.3 Professional statements and industry guidance

Veterinary associations and industry bodies play a central role in shaping professional norms and guiding best practices. Their statements often seek to balance environmental, health, and welfare concerns. Their messaging is primarily aimed at professional audiences.

The British Veterinary Association (BVA), the UK's national representative body for the veterinary profession, provides clinical guidance, develops policies, and publishes articles on animal health and welfare. Its positions carry significant influence within the veterinary community, shaping professional practice and clinical advice. Notably, in July 2024, BVA updated its guidance on plant-based diets in a statement about diet choices for cats and dogs, ending its formal objection to nutritionally complete vegan diets for dogs (BVA 2024c). This move signals growing professional acceptance of alternative protein sources in pet food and may encourage veterinarians to discuss such options more openly with pet owners, potentially influencing feeding practices on a wider scale. At the same time, the association warns against blindly applying human dietary trends to pets, stressing the importance of tailoring nutrition to species-specific needs (BVA 2024e).

On parasiticides, BVA, BSAVA (British Small Animal Veterinary Association), and BVZS (British Veterinary Zoological Society) released a joint policy statement in 2021 advocating for more responsible use of parasiticides for cats and dogs. The statement discourages routine, year-round parasite treatments and calls for a risk-based, case-by-case approach. It also encourages veterinary professionals to discuss environmental implications of parasiticide use with pet owners, marking a step toward integrating environmental awareness into standard veterinary consultations (BVA 2021). While it remains unclear to what extent veterinary practices have

changed in response to these recommendations, where adopted, such guidance may encourage veterinarians to discuss environmentally responsible treatment options more openly with pet owners, potentially influencing broader pet care practices.

Professional publications like Veterinary Prescriber also contribute to this conversation by translating academic and regulatory research into practical, evidence-based advice for veterinary professionals. Established in 2012, Veterinary Prescriber draws on trusted databases such as the RCVS (Royal College of Veterinary) Knowledge Discovery Service and CAB Abstracts, and its outputs go through rigorous editorial review. In 2023, it published guidance on 'safe dog swimming', recommending that owners of regularly swimming dogs limit the use of topical parasiticides and instead adopt 'as-needed' treatment protocols. The publication also amplified concerns raised in the EMA's 2023 reflection paper, helping to bridge the gap between regulatory updates and veterinary practice.

The PDSA's 2022 PAW Report highlights public attitudes and behaviour in pet feeding. It reported that 60% of pet owners give their animals human food such as leftovers, cheese, or bread, which is an example of the humanisation trend in pet feeding. The report links this practice to negative health outcomes like obesity and poor diet quality and points out the welfare implications of anthropomorphism in pet care (PDSA 2022).

Other important contributors include: the European Scientific Counsel Companion Animal Parasites (ESCCAP), which issues regularly updated, peer-reviewed guidelines for parasite control, particularly Guideline 03 which is focused on ectoparasites in dogs and cats (ESCCAP 2022); the National Office of Animal Health (NOAH), which provides principles of regulation on the safe and environmentally responsible use of veterinary medicines; Global Pets (Pets International Magazine), a business-to-business platform featuring expert commentary on industry trends, with contributors like Alexander and Moran (2023) highlighting the growing tension between consumer preferences for premium pet food and concerns about environmental sustainability.

These professional outputs represent interpretations of science and policy tailored for clinical and industry audiences. Despite their volume and quality, most remain targeted at professionals and are not designed for general audiences. This reflects the need for improved outreach strategies that can translate expert guidance into more accessible formats and motivate meaningful behaviour change among pet owners.

2.3 Forms of owner-facing messaging

Communication with pet owners about environmental and public health issues often occurs through a second tier of actors who serve as intermediaries between authoritative information sources and the public. These communicators reframe or interpret scientific and regulatory content into more accessible and sometimes more persuasive messages for pet owners. This section outlines the key groups involved in owner-facing communication, the channels they use, and the challenges and opportunities they face in influencing owner behaviour.

2.3.1 Veterinary professionals

Veterinarians are consistently ranked among the most trusted sources of information for pet owners. Their position at the intersection of animal care and public engagement gives them unique potential to influence owner behaviour. According to the 2017 PAW Report, 85% of UK dog, cat, and rabbit owners had registered their pet with a veterinary practice. However, an estimated 3.1 million pet dogs, cats, and rabbits in the UK were still unregistered at the time (PDSA 2017), indicating significant room for expanding veterinary reach.

More recent data reinforce the influence of veterinary professionals. A 2024 study by Yoder et al. found that 90% of surveyed dog owners on Hampstead Heath identified veterinarians as their primary source of advice on flea and tick treatments—far exceeding reliance on online sources (29%) or product packaging (19%). Yet, awareness of

environmental impacts remains low: only 13% of owners who both swam their dogs and used parasiticides reported receiving any information about potential harm to aquatic wildlife and ecosystems.

This gap highlights a broader issue. Veterinary guidance tends to prioritise pet health and welfare, with relatively little emphasis on environmental sustainability or public health concerns in pet diets or parasiticide use. For example, a 2024 BVA report noted that many clients are not routinely discussing dietary choices with their vet, with six in ten vets unsure how many of their clients were feeding their pets meat-free diets. In response, the BVA has urged veterinary professionals to act as a 'trusted voice' on complex and evolving topics like plant-based diets. This includes staying well-informed, asking the right questions during consultations, and systematically recording data to help monitor the long-term effects of new feeding practices (BVA 2024d).

Veterinary consultations present a valuable touchpoint for delivering behaviour-changing messages. To unlock this potential, more integrated guidance is needed particularly on issues such as parasiticide use and sustainable diets. Veterinary professionals need better resources and broader structural support (e.g. professional development programmes or standardised protocols delivered by professional organisations such as BVA) to embed sustainability into their routine practice. Strengthening these frameworks would enable veterinarians to incorporate environmental and human health considerations into their pet health advice more consistently.

2.3.2 Animal welfare charities and rehoming centres

Animal welfare charities play a key role in responsible pet ownership education, particularly through adoption processes and post-adoption support. Organisations such as the Royal Society for the Prevention of Cruelty to Animals (RSPCA), Battersea Dogs and Cats Home, Dogs Trust, Cats Protection, and Blue Cross engage directly with pet owners via care

guides, online resources, helplines, and in-person consultations. As trusted sources of advice, they provide tailored, practical support to help owners make informed decisions.

Although their primary focus is on animal welfare, these organisations routinely address issues such as diet and parasite control. However, the environmental and public health dimensions of pet care (such as the environmental impact of parasiticide use) are typically absent or only briefly acknowledged. These charities do not usually conduct original research but frequently draw on existing evidence to inform the guidance they provide to pet owners. As frontline communicators with high levels of public trust, they are well-positioned to expand their messaging to include sustainability and environmental concerns, but currently such topics remain underemphasised in their educational materials.

2.3.3 Campaigning and advocacy groups

A growing number of campaigning and advocacy organisations are drawing attention to the environmental impact of pesticides, including those used in pet treatments. While many of these groups have traditionally focused on the effects of agricultural pesticides on pollinators such as bees, there is an emerging shift toward pet-specific concerns. Well-established organisations like Greenpeace, the Bumblebee Conservation Trust, Wildlife and Countryside Link, and Pollenize have long published articles and blog posts about the harmful effects of pesticides on ecosystems. More recently, groups such as The Rivers Trust (Woodard 2023), The Kent Wildlife Trust (2024), and The Exmoor Society (2025) have begun addressing the contamination of UK waterways and wildlife by flea and tick treatments used on pets.

Animal rights organisations also contribute to this space. As the world's largest animal liberation group, PETA (People for the Ethical Treatment of Animals) frames dietary shifts not only around animal welfare but also environmental sustainability and human health. PETA UK offers a dedicated

page promoting vegan diets for dogs, arguing that dogs can thrive on nutritionally complete plant-based diets formulated by professionals. It highlights how traditional pet food production consumes vast amounts of land, water, and energy, and contributes significantly to environmental pollution. Environmental charities such as Songbird Survival, which focuses on the decline of UK songbirds, have also engaged with pet parasiticide issues. Since 2020, the charity has funded research at the University of Sussex demonstrating the environmental harms of chemicals from pet flea treatments, such as their accumulation in fur used by nesting birds, which leads to increased chick mortality and potentially severe consequences for UK bird populations (Songbird Survival, 2021; 2025).

In addition to educational content, campaigning groups are using petitions, open letters, and legal inquiries to influence policy and spark public debate. As part of its Waters of Exmoor campaign, The Exmoor Society launched a 2025 petition titled 'Stop Pet Pesticides Polluting Our Rivers'. It called on the UK government to regulate flea and tick treatments more strictly. In a letter to Defra Minister Baroness Hayman, the Society urged the Veterinary Medicines Directorate (VMD) to restrict or ban the sale of imidacloprid- and fipronil-based parasiticides, mandate clearer warning labels and usage guidelines (e.g. avoid bathing dogs or allowing river access after treatment), and ultimately ban all pesticide-active ingredients in pet treatments due to their environmental toxicity. As of 4 August 2025, the petition had gathered over 3,500 verified signatures.

In a more expansive effort, Pesticide Action Network UK (PAN UK) coordinated a 2023 open letter signed by 24 organisations including The Wildlife Trusts, RSPB, The Progressive Veterinary Association, and the Veterinary Poisons Information Service. It called for a ban on all pesticide ingredients in pet medicines that are no longer approved for agricultural use – a stronger stance than other campaigns such as Waters of Exmoor, which only advocate for making parasiticides prescription-only. This was the most wide-reaching joint statement to date and provoked pushback from the industry body National Office of Animal Health (NOAH), which

warned that such bans could reduce treatment options and negatively impact animal welfare (NOAH 2023). These contrasting positions have created a more visible and contested landscape of widened public exposure and discussion around the environmental risks of pet parasite treatments.

WildFish (Linley-Adams 2025) has taken a legal angle, announcing an investigation into how veterinary medicines are regulated in the UK. Its forthcoming report will examine regulatory gaps and propose reforms. Currently, WildFish is the only group directly criticising the VMD for its failure to communicate environmental risks to pet owners, especially in the face of aggressive product marketing tactics that encourage unnecessary prophylactic treatments.

These efforts signal a growing willingness among campaigning and advocacy groups to challenge the norms of veterinary regulation, manufacturing, and communication. However, while many campaigns call for systemic change (such as prescription-only access or full bans on pesticide ingredients), they often lack incremental, practical guidance that could support immediate changes in individual pet owner behaviour. There is an opportunity here to bridge regulatory ambition with on-the-ground actions that owners can take now.

2.3.4 Professional bodies engaging in public-reaching activities

Some professional bodies extend their influence beyond veterinary professionals to engage directly with the public through campaigns, surveys, and educational resources. The People's Dispensary for Sick Animals (PDSA), a national veterinary charity founded in 1917, plays a key role in public engagement. Through its annual PAW Report – the UK's largest and most demographically representative study of pet wellbeing – PDSA has surveyed over 100,000 dog, cat, and rabbit owners since 2011 in collaboration with the market research company YouGov. They have used these findings to raise awareness of animal health and welfare issues via

media campaigns aimed at behaviour change. One notable initiative is Pet Fit Club, a national campaign launched in 2005 to address pet obesity. Each year, some of the UK's most overweight pets are enrolled in a six-month diet and exercise programme overseen by PDSA veterinarians. By sharing their stories and images through media coverage, the campaign highlights the dangers of anthropomorphism in pet feeding and promotes healthier owner behaviours. For example, in the launch of the 2018 campaign, PDSA revealed the PAW Report data that 5.7 million pets were fed human foods daily, including crisps, cake, cheese, chips, chocolate, and takeaways. PDSA's approach has also been documented in a peer-reviewed open-access article outlining its research and campaigning methodology (Wensley et al., 2021).

The British Veterinary Association (BVA) similarly uses public-facing campaigns to extend the reach of its professional insights. Drawing on data from its Voice of the Veterinary Profession survey, BVA supports campaigns, social media outreach, speaking events, and lobbying for legislative and regulatory reform (BVA 2024b). As stated in one of its strategy updates, 'we needed more insight into the concerns, challenges and experiences of our members to help us deliver influential, evidence-based campaigns that could drive positive change' (BVA 2024a). In 2018, BVA partnered with the Royal College of Veterinary Surgeons (RCVS) to launch the social media campaign 'Pets Need Vets', encouraging owners to register their pets with veterinary practices and promoting the benefits of tailored nutritional and health advice (RCVS 2018). The campaign incorporated PAW Report data (PDSA 2017) to enhance trust and drive behaviour change. RCVS also promotes its public-facing 'Find a Vet' tool in the campaign to help owners access appropriate veterinary care.

Other notable initiatives include: UK Pet Food, an industry group that launched the YouTube campaign 'Love Them Madly, Feed Them Wisely' in 2024, aiming to influence pet food choices by linking health and environmental concerns; the Kennel Club, which runs regular outreach through public events and online platforms and maintains detailed metrics

on audience engagement, offering potential pathways for more environmentally and human health focused communication. Examples from outside the UK include ESCCAP Poland, which distributed tools such as rulers printed with visually-appealing parasite control advice, making scientific guidance more approachable in daily settings.

2.3.5 Journalism

News media and science communicators play an increasingly important role in raising public awareness about the environmental and health impacts of pet care, though overall media coverage remains limited. Major outlets such as BBC News and The Guardian have reported on issues like river contamination from flea treatment chemicals and the broader ecological consequences of common pet care practices. Journalists including Helena Horton (The Guardian 2025) and Stephen Stafford (BBC News 2024) have covered the detection of pesticide residues in English rivers linked to pet flea treatments. Science writer Sophie Pavelle has drawn on research from the University of Sussex to advocate for more sustainable flea control methods, highlighting potential impacts on songbirds (Pavelle 2025). Specialist publications, such as Chemistry World, have focused on topics like flea treatment–tainted pet fur in songbird nests and the resulting chick mortality (King 2025), as well as government efforts to address pesticide presence in rivers and lakes (Robinson 2025).

These platforms offer broad visibility, reaching both current and prospective pet owners and helping to translate scientific research into accessible narratives for the public. However, coverage is often episodic, typically coinciding with new studies or specific campaigns, which limits sustained follow-up or embedded behavioural guidance for pet owners. When guidance is included, mainstream journalism can provide useful signposting: for example, a 2021 BBC report on the surge in UK pet ownership during the Covid pandemic referred readers to UK Pet Food's webpage for health and nutrition advice for cat and dog owners (BBC News 2021).

2.3.6 Land managers

Local land managers also play a role in owner-facing communication, particularly where pet care intersects with public spaces and environmental protection, most notably in relation to pesticide use. The Broads Authority, which manages the Norfolk and Suffolk Broads (Britain's largest protected wetland and third-largest inland waterway), has publicly supported awareness campaigns on the environmental risks of parasiticides. In 2025, it recommended pet owners to keep treated dogs out of waterways, use spot-on treatments only when necessary, and consider less-toxic alternatives (The Broads Authority 2025).

Urban space managers are similarly positioned to influence pet owner behaviour. A study by Yoder et al. (2024) documented how simple signage warning dog walkers about harmful algae led to a significant decline in both dog swimming activity and the presence of pesticides such as imidacloprid and fipronil in the water. This suggests that low-cost, local interventions can have meaningful environmental impacts. However, there is currently no formal requirement for local authorities to issue warnings or implement controls related to pet parasiticide use, leaving such efforts inconsistent and largely voluntary.

2.3.7 Retailers, manufacturers, and certifiers

Retailers and manufacturers shape the information environment for pet owners through labelling, product placement, and marketing. Although they do not typically produce formal educational content, their influence at the point of sale is substantial in determining what products are most visible, how they are framed, and what information accompanies them.

In recent years, calls for more responsible retail practices have grown. Pesticide Action Network UK has urged retailers to stop selling parasiticide products containing harmful pesticide ingredients and to promote safer alternatives. Some pet stores have taken action. The Healthy Pet Store in Southampton has publicly advised dog owners to limit routine flea, tick,

and worm treatments to protect local biodiversity, particularly in sensitive areas such as the New Forest (Companion Life 2023). Its Managing Director, Deborah Burrows, has echoed concerns raised by The Wildlife Trusts regarding the ecological damage caused by traditional insecticides. Burrows has also leveraged her role as an ambassador for the local New Forest Dog Owners' Group to build online communities promoting chemical-free alternatives and encouraging shifts away from routine, prophylactic treatments.

Manufacturers (such as pet food companies and pharmaceutical producers) also hold responsibility through control over the content and design of product labels. These could become important tools for raising awareness, for example, by including clearer environmental warnings or promoting lower-impact options. However, industry insights suggest that messaging must be carefully framed to resonate with consumers. Valerie Henssen, CEO and Co-Founder of VEGDOG, a vegan dog food company, reflected on early marketing strategies: 'At the beginning [we] focused on animal suffering, i.e. sharing statistics, and trying to inform customers about this, but we realised we were losing and not gaining customers.' This suggests that emotionally charged or guilt-based messaging may be less effective than practical, benefit-oriented communication.

Pharmaceutical manufacturers have also developed resources to support responsible product use. Krka launched an information sheet in 2023 on risk-based parasiticide use for cats and dogs, developed in collaboration with Ian Wright, Chair of the European Scientific Counsel Companion Animal Parasites (ESCCAP). The guidance discourages blanket treatments and highlights the potential environmental consequences of inappropriate use, recommending that veterinarians systematically assess risks of treatment options tailored to each pet's lifestyle and circumstances (Krka 2023). In 2024, Krka extended these efforts with the 'Ears to Tail' practice resources, including pet owner guides, reception posters, and waiting room slides that reinforce risk assessment approaches to parasiticide use (Krka 2024; Vet Times 2024). These resources complement professional

guidance, bridging the gap between veterinary advice and owner behaviour.

Certification bodies also influence labelling standards, including for organic, cruelty-free, or sustainably sourced pet products. Although they may not create the labels themselves, they help develop and enforce standards that guide product formulation and consumer choice. Certification bodies could play a larger role in promoting environmentally responsible pet products, for example by avoiding water-toxic parasiticides, highlighting low-impact ingredients, or ensuring that fish-based cat foods are certified sustainable.

3. Driving behaviour change among pet owners

This chapter focuses on how behaviour change can be achieved among pet owners through tailored communication strategies. It explores how different environmental pressures from premium pet food production and parasiticide use shape both the kinds of messages that resonate with owners and the actors best positioned to deliver them.

3.1 Differences between communicating the impacts of premium pet food production and pet parasiticide use

Although both pet feeding practices and parasite control have significant environmental and public health consequences, the ways in which these issues are communicated to owners differ. This section outlines four dimensions that shape owner-facing communication strategies: (1) anthropomorphism; (2) interdependency between human, animal, and environmental health; (3) pet owner accountability; and (4) proximity and immediacy of impacts.

3.1.1 Anthropomorphism

Anthropomorphism in pet ownership has a strong influence on the premiumisation of pet food. As owners increasingly project human values, tastes, and needs onto their pets, demand has grown for 'human-grade' products. Pets are treated as family members whose diets should mirror human ones – a tendency that drives resource-intensive pet food production and has direct implications for climate change and land use pressures. Communicating environmental impacts in this context therefore requires recognising how deeply human perceptions shape feeding practices while challenging assumptions that 'more premium' means 'better' for pet health.

In contrast, anthropomorphism plays a far smaller role in pet parasiticide use. Communication rarely equates parasite treatments with human

medical care or diet, and pets are framed as vectors of environmental harm through which toxic chemicals enter rivers, ponds, and soils. Campaigns such as Froglife's #pawsagainstponds highlight how routine treatments can devastate amphibian habitats, stressing the ecological role of pets as transmitters of toxins rather than as family members with analogous human needs (Froglife 2022). Communication here centres less on the human-like qualities of pets and more on their environmental harms and role in transmitting risks to wildlife and public health.

3.1.2 Interdependency between human, animal, and environmental health

In discourse around pet diets, feeding is primarily framed as an issue of animal health, with environmental and human health dimensions positioned as secondary concerns. Veterinary associations such as the BVA urge owners to make 'informed choices about what to feed their pets', noting that diets must balance nutrition, safety, and sustainability (2024c; 2024d). However, communication emphasising this interdependency remain complex, as feeding practices are simultaneously matters of species-specific welfare and contribution to global food system pressures. Pet owners must therefore weigh multiple, sometimes conflicting, priorities, ensuring dietary balance while considering broader implications for environmental and human wellbeing.

Communication around pet parasiticide use more readily fits into the One Health framework, which explicitly recognises the interconnections between animal, human, and environmental health and the cascading consequences of issues that affect any of these sectors (Preston-Allen et al. 2023). Pets treated with imidacloprid or fipronil can act as pathways for toxic residues to enter aquatic ecosystems, which harm biodiversity, water quality, and even owner safety. Campaigners such as Froglife demonstrate this linkage: dogs entering ponds after topical treatments can kill aquatic invertebrates, stir sediment that harms amphibian development, and simultaneously expose themselves to hazards such as algal toxins (Froglife

2022). Survey data also suggest strong owner concern for these interconnections: on Hampstead Heath, 94% of dog owners rated protecting nature as important in shaping their treatment decisions (Yoder et al. 2024). Compared to dietary messaging, parasiticide communication currently appears better positioned to mobilise owner concern for shared environments, given its more immediate framing of interdependency between human, animal, and environmental health.

3.1.3 Pet owner accountability

For premium pet food, responsibility is highly individualised. Pets have no agency in diet choice, so owners are fully accountable for the environmental consequences of feeding practices. Interventions must therefore target voluntary owner decisions and encourage experimentation with lower-impact diets, portion control, and waste reduction. This makes owner behaviour central to pet dietary shifts but also means communication faces resistance from emotional and cultural dimensions to feeding practices. Reflecting on this challenge, the BVA has recommended the creation of accessible resources to help owners evaluate diets based on nutrition, safety, and sustainability, with clear signposting to additional information for those seeking more detail (2024e). It has also called for communications campaigns that support owners in maintaining healthy pet weights while highlighting the wider One Health implications of overfeeding.

For pet parasiticide use, accountability is more strongly mediated by legal and policy contexts as well as professional expertise, whose guidance shapes owner choices more than personal preference alone. The European Medicines Agency and the UK Veterinary Medicines Directorate both provide regulatory oversight on the safe use of veterinary parasiticides and establish standards that veterinarians must follow. Professional bodies such as the British Veterinary Association issue guidance discouraging routine, year-round treatments and promoting risk-based, case-by-case approaches (2021). These recommendations shape how vets advise pet

owners, including whether to use topical treatments, collars, or oral medications, and how to consider environmental impacts. Consequently, effective communication must address both professional practice (ensuring vets give evidence-based advice) and public understanding (empowering owners to ask informed questions in expert consultations).

3.1.4 Proximity and immediacy of impacts

For premium pet food production, environmental impacts are global, diffuse, and long-term. Feeding decisions contribute to greenhouse gas emissions, agricultural land use, and pressures on global food systems and biodiversity (Alexander et al. 2020). Communicating these concerns requires framing pet feeding within debates on food security, climate change, and biodiversity loss on a planetary scale – a difficult task when individual pet owners may struggle to perceive how their personal choices meaningfully shape such vast systems. The temporal and spatial distance between cause and effect weakens the immediacy of accountability.

In contrast, the environmental and public health impacts of pet parasiticide use are less disconnected from local environments. Contamination occurs in neighbourhood rivers, ponds, and urban green spaces, posing direct risks to wildlife and local ecosystem health. Because consequences manifest close to home, communication can rely on simple interventions (e.g. signage discouraging swimming after treatment, Yoder et al. 2024) to reduce environmental harm tangibly. This proximity makes behaviour change more straightforward to encourage, since owners can see tangible connections between their actions and environmental consequences, even without deep systemic understanding.

3.2 Key messages in communicating the impacts of premium pet food production

3.2.1 Choosing less emission intensive feeding options or companions

Communication around sustainable feeding draws attention to the range of dietary alternatives available to pet owners. Recent BVA survey data indicates a growing interest in non-traditional diets, with 42% of vets reporting clients who feed meat-free diets, and 29% reporting clients using insect protein (BVA 2024c). Key dietary alternatives include:

(1) Meat-free diets. While options for cats remain limited because they are obligate carnivores, vegan and vegetarian foods for dogs are expanding rapidly. Evidence suggests vegan-fed dogs may exhibit lower rates of health disorders (36%) compared to conventionally meat-fed dogs (49%) (The Insight Partners 2021).

(2) Reduced-meat diets, with a lower proportional content of ruminant meat and an increased proportion of plant-based ingredients. Flexitarian approaches to pet feeding mirror owner habits, for example one 'veggie day' per week or changing to vegan snacks (ProVeg 2023).

(3) Animal by-products (ABPs). Using organ meats and trimmings from the human food chain prevents waste and reduces demand for prime cuts. This practice ensures no animals are raised solely for pet food while creating high-quality, nutritious pet food products.

(4) Insect-based protein. Insects offer higher protein content and digestibility than many by-products, alongside substantial reductions in land use, water use, and carbon emissions (Alexander et al. 2017; Bosch et al. 2014). Once considered culturally unacceptable, insect protein is increasingly framed as a more common part of future diets (van Huis 2013).

Affecting voluntary feeding choices by raising owner awareness suggests a significant role for feed manufacturers and veterinary professionals,

though questions remain about how far the industry is willing to take responsibility through clearer labelling and transparency. Beyond voluntary change, Alexander et al. (2020) highlight the potential for mandatory or market-based incentives, such as labelling regulations or even breed-based externality taxes linked to environmental impacts. Messaging should therefore target not only individual owners but also professional and institutional actors (e.g. veterinarians, campaigning and advocacy groups) who serve as key information channels for feeding practices.

As highly trusted sources of advice, veterinary professionals can guide owners through the health implications of alternative diets, offering tailored recommendations that balance species-specific nutritional needs with wider environmental considerations. Professional bodies can reinforce this role by equipping vets and other frontline practitioners with clear, evidence-based materials that enable confident, consistent communication. At a broader level, campaigning and advocacy groups can expand public awareness of the environmental footprint of premium pet food through social media outreach and press coverage; they can also press for systemic change through calling for clearer labelling standards and stronger consumer education policies.

3.2.2 Feeding appropriate portions and reducing food waste

Another central message is that sustainable feeding involves not only what pets eat, but how much. Overfeeding drives both unnecessary food waste and rising rates of pet obesity, creating a double burden for the environment and animal welfare. Animal welfare charities, rehoming centres, and shelters can play a vital role here by providing hands-on education on portion control at the point of adoption (e.g. through care guides, helplines, and follow-up support); in particular, framing portion discipline as beneficial for pet health, cost savings, and environmental sustainability can make it an appealing behavioural change for owners. Veterinarians are also well-positioned to advise on species-specific portion sizes and prevent overfeeding. They can reinforce the connection

between proper portioning, pet health, and environmental impact during routine consultations, vaccinations, and weight checks, creating multiple touchpoints for owner engagement. Media coverage can also make portion control more relatable by highlighting simple, everyday strategies to cut waste while keeping pets healthy.

3.2.3 Participating in pet adoption or re-homing schemes

Communication around sustainable pet ownership extends beyond dietary shifts to population-level choices. Adoption and rehoming can reduce demand for breeding new animals, limiting unnecessary growth in cat and dog populations and the associated environmental impacts of producing premium food for additional pets. Animal charities and rehoming centres can communicate this message, framing adoption and rehoming as both ethically responsible and environmentally beneficial choices. Campaigning and advocacy groups can run public awareness initiatives that link overbreeding and unnecessary pet production to increased environmental pressures, including higher demand for resource-intensive pet foods.

3.3 Key messages in communicating the impacts of pet parasiticide use

3.3.1 Using parasiticide-based treatments reactively instead of prophylactically

Prophylactic use refers to administering a treatment to healthy animals to prevent the establishment of parasites (Preston-Allen et al. 2023). Routine, year-round prophylaxis is increasingly discouraged by veterinary professional bodies and campaigning groups, as it can contribute to chemical runoff into local waterways without providing proportional health benefits. Pet owners should be encouraged to consult veterinary

professionals and administer treatments only when strictly necessary, based on individual risk factors and local parasite prevalence. Awareness of strategic upselling in some corporate-owned practices is also important, as additional treatments may sometimes be recommended primarily for profit rather than pet health. Framing parasiticide use reactively promotes evidence-based decision-making, reducing both environmental contamination and unnecessary chemical exposure to pets. Professional bodies such as the BVA can reinforce this approach through owner-facing resources (e.g. leaflets, infographics, and media campaigns) that encourage a case-by-case, risk-based treatment strategy. Campaigning and advocacy groups can further support behaviour change by promoting 'treat only when needed' messages and advocating for tighter regulation of over-the-counter pet parasiticide products.

3.3.2 Refraining from bathing pets or allowing them to swim in waterways after the application of topical treatments

Owners should avoid bathing their pets or allowing them into ponds, rivers, or lakes for the recommended period after treatment – a simple behavioural adjustment directly protects aquatic ecosystems. Local interventions, such as signage along watercourses, can remind owners to reduce swimming or bathing activities of treated pets. Veterinarians can provide clear guidance on how long pets should avoid water or bathing post-treatment. River trusts and conservation charities can educate communities through awareness campaigns. Journalists can help make this hidden problem visible by reporting on dog swimming habits and declining water quality supported by scientific evidence.

3.3.3 Reading the veterinary medicine labelling and packaging carefully before use and following the instructions regarding product administration and disposal

Proper use and disposal of parasiticides are essential to prevent environmental harm and protect animal and human health. Key advice for pet owners includes: (1) follow dosing instructions precisely, including the correct amount, frequency, and route of administration; (2) observe special warnings, such as avoiding washing the pet, its bedding, or allowing access to surface water for specified intervals; (3) dispose of packaging, collars, and gloves responsibly, never flushing waste down toilets or sinks.

Veterinary professionals remain central to communicating these messages. Owners should feel encouraged to ask questions during consultations and consult product literature alongside professional advice to ensure safe, effective, and environmentally responsible parasiticide use. The National Office of Animal Health (NOAH) also notes that labels, leaflets, and packaging can act as a first line of communication clearly outlining environmental and health risks for pet owners (NOAH n.d.). When combined with tailored veterinary guidance, this approach empowers owners to make informed decisions and reduce unintended environmental harm.

Recommendations for Lund Trust

Communication campaigns should prioritise organisations that can speak directly to pet owners, such as veterinarians, animal charities, advocacy groups, land managers, retailers, and journalists. These actors are best placed to translate complex scientific and regulatory messages into practical advice that pet owners can act upon. Primary information sources, including scientists, regulators, and industry bodies, can play a supportive role by producing clear evidence-based materials and collaborating with these organisations to strengthen public outreach and accessibility.

For pet parasiticides, a central priority is encouraging responsible use of veterinary medicines containing pesticide active substances. Lund Trust could fund charities leading awareness campaigns, both those directly focused on pet parasiticides (e.g. Pesticide Action Network UK, WildFish, the Rivers Trust, Kent Wildlife Trust, and Exmoor Society) and those working more broadly on pesticide and water quality issues (e.g. Freshwater Biological Association, Greenpeace, the Bumblebee Conservation Trust, Wildlife and Countryside Link, and Pollenize). Messages should encourage pet owners to stop using parasiticides prophylactically and instead monitor their pets and treat only when there is evidence of a problem. Charities can also use petitions and consumer campaigns to build public momentum and raise awareness of the need for regulatory action. For premium pet food, funding campaigns with charities (e.g., PDSA, RSPCA, Battersea Dogs & Cats Home, Dogs Trust, Cats Protection, Blue Cross, PETA) can raise awareness of alternative diets, including plant-based and reduced-meat options. These charities can help pet owners understand the environmental impacts of meat-intensive diets and encourage voluntary adoption of more sustainable feeding practices.

Charities can also work with professional bodies (e.g. BVA, BSAVA, BVZS) to encourage veterinary professionals to act as trusted sources of advice. These organisations can encourage veterinarians to guide owners on appropriate feeding, dosing, and product disposal practices, as well as

recommend plant-based diets or non-chemical alternatives where appropriate.

Local interventions can also play an important role in reducing environmental harm. Funding outreach campaigns with local land managers (e.g. Broads Authority) could help establish simple but effective measures, such as warning signs along rivers, lakes, and ponds advising against swimming or bathing pets shortly after treatment. Local wildlife charities (e.g. Kent Wildlife Trust) who are already drawing attention to the ecological impact of flea treatments can work with local authorities to provide a model for place-based interventions.

Investigative and science journalism can raise public understanding of both premium pet food and parasiticide impacts. Campaigns can support collaborations between journalists, scientists, conservation groups, and veterinary professionals to ensure accurate, credible reporting. Media coverage can also incorporate practical guidance for pet owners, provided by researchers or charities, to translate scientific findings into accessible advice.

Retailers are another important channel for reaching pet owners. Non-profit organisations could be funded to work with supermarkets and pet shops to promote low-impact pet food and safer, less toxic parasite treatments. Retail-level interventions, combined with consumer education, can drive bottom-up behavioural change while encouraging industry accountability.

Finally, Lund Trust could strengthen the evidence base and bridge the gap between research and practice by funding awarding groups (e.g. Songbird Survival). Research funding could focus on understanding the ecological and public health impacts of pet parasiticides and premium pet food, while also exploring safe and effective alternatives such as plant-based pet diets or non-chemical parasite control methods. Crucially, outputs should not remain in academic journals but be translated into open access, owner-friendly briefing notes and information sheets designed for pet owners. This ensures that science directly informs owner behaviour,

while also equipping veterinarians, charities, and campaigners with credible, easy-to-communicate materials.

Conclusions and limitations

This report has examined the environmental and public health impacts of pet ownership in the UK, focusing on premium pet food production and parasiticide use as illustrative case studies. Meat-based pet foods contribute substantially to greenhouse gas emissions, land use, and resource consumption, while parasiticides can contaminate waterways, harm biodiversity, and pose indirect human and animal health risks. These findings reveal the need for targeted interventions to reduce the ecological footprint of pet ownership, including responsible feeding practices and parasiticide use. They also demonstrate that effective communication through veterinarians, charities, journalists, land managers, and retailers can drive behaviour change among pet owners, translating scientific and regulatory information into accessible guidance. Philanthropic support, such as funding campaigns, awareness initiatives, and investigative journalism, can amplify these messages and drive broader systemic change.

Although this study focused specifically on companion animals, the findings are broadly applicable to other environmental and public health contexts, including livestock parasiticide use, which similarly poses risks for environmental contamination. Future work can also examine socio-cultural trends among younger generations, particularly Millennials and Generation Z, who are increasingly prioritising pets over parenthood and investing more in their pets' health – a trend driven by higher discretionary income, declining birth rates, and longer times to marriage (Harris Williams 2024). These patterns reveal the necessity of timely, targeted interventions to mitigate the environmental and public health impacts of pet ownership.

Limitations of this research include its reliance on desk-based review and literature analysis, which may omit emerging practices or informal behavioural patterns among pet owners. Future work could include the

longitudinal tracking of guidance uptake by pet owners, combined with interviews or surveys, to better understand how interventions translate into sustained behavioural change. Overall, the findings reinforce the urgency of addressing the environmental and public health impacts of pet ownership and the potential for coordinated communication and philanthropic efforts to foster responsible pet ownership in the UK.

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