Submission of information on:

Name of substance:	Anticoagulant rodenticides
Relevant use category for lack of suitable alternatives:	☒ House mice and rats – professional users with demonstrated competence – indoor ☒ House mice and/or rats – professional users with demonstrated competence – outdoor around buildings ☒ Rats – professional users with demonstrated competence – sewers ☐ House mice – general public – indoor ☐ Rats – general public – indoor ☐ Rats – general public – outdoor around buildings ☒ House mice and rats – professional users with demonstrated competence – permanent baiting
Legal name of submitter(s):	National Pest Technicians Association – NPTA LTD

Introduction

The National Pest Technicians Association (NPTA) is the UK's longest-standing, independent trade association dedicated to the professional pest control industry. Established in 1993, the NPTA has grown to represent nearly 1,100 pest control companies and almost 3,000 professional technicians, from sole traders through to large national providers as well as manufacturers and distributers. For over 30 years, we have been the collective voice of frontline pest controllers, working to uphold professional standards, support members' businesses, and safeguard the UK's public health, food supply chains, and built environment from pest threats.

Rodent infestations remain a serious and growing challenge across Great Britain. In 2024, UK local authorities made almost 300,000 visits to homes to tackle pest problems, of which 91% were rodent-related (Direct Line Group, 2025). Rentokil data show rat activity up 31% and mouse activity up 32% in Q4 2024 compared to Q3 (reported by Pest Magazine, 2025). Between 2023 and mid-2025, councils recorded more than 500,000 rat infestations (Drain Detectives FOI analysis, 2025). UK businesses are estimated to have lost £12 billion over the past decade to rodent-related damage (Rentokil white paper, 2023). These figures demonstrate the increasing scale and cost of rodent infestations in the UK and underscore the critical role of effective rodent management.

Rodent infestations present serious and ongoing challenges in the UK. They spread diseases such as leptospirosis, *Salmonella*, and hantavirus; damage property and electrical infrastructure; and compromise food hygiene in both domestic and commercial settings. The economic and food security impacts are equally significant.

A 2023 survey by BASF (UK) found that **84% of UK farmers** reported problems with rats or mice in the past year, and **40%** said rodent control had become more difficult, with many attributing this to rodenticide resistance (BASF, 2023). In addition, a DEFRA-funded study on on-farm loss and waste estimated that pests and pathogens, including rodents contribute to **5–20% annual cereal productivity losses** in the UK (DEFRA, 2023). These findings highlight that rodent pressure is increasing domestically, with direct consequences for food production, farm resilience, and the wider supply chain.

The current HSE consultation on second generation anticoagulant rodenticides (SGARs) therefore comes at a critical time. While all chemical interventions carry inherent risks, SGARs remain the most effective, practical, and responsible tools available to professional pest controllers.

The robust industry training framework for purchasing and using rodenticides requires completion of the RSPH Level 2 Award in the Safe Use of Rodenticides or CRRU approved equivalent qualification, ensuring compliance with The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK. The RSPH Level 2 Award in Pest Management which is an enhanced qualification also ensures essential skills and knowledge.

Specific CPD requirements have been introduced for 2026, representing part of a wider strengthening of the The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK. Ongoing professional development is a critical safeguard for the sector, ensuring pest controllers remain up to date with best practice, resistance management, and environmental protection measures. By embedding CPD as a formal requirement, the sector demonstrates its commitment to maintaining high professional standards and public confidence in rodenticide stewardship.

Rodent control is not a matter of convenience; it is a cornerstone of public health, food security, and infrastructure protection in Great Britain. Rodents transmit serious zoonotic diseases such as leptospirosis, *Salmonella*, and hantavirus, and are responsible for millions of pounds of loss from food contamination, property damage, and electrical fires every year. Effective, reliable, and scalable tools are therefore essential.

By contrast, currently available alternatives are fragmented, less effective, more costly, and carry significant risks to animal welfare and public health. Cholecalciferol is available in only two products with restricted use and as with anticoagulants is classed as an endocrine disruptor. Alphachloralose is limited to house mice and indoor use. Phosphine gas is authorised only for outdoor rodent burrow treatments and is not approved for use near buildings for rodent control**.** Its use requires specialist training, strict certification, and adherence to label conditions, making it unsuitable as a practical alternative in most urban or built environments (HSE, 2022).. Traps, while useful in some contexts, are labour-intensive, expensive, and raise serious welfare concerns when death is not instantaneous.

Non-chemical approaches such as habitat management, exclusion and Integrated Pest Management (IPM) are already embedded in professional practice under The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK (CRRU, 2020; HSE, 2022). These measures including proofing, exclusion, waste management, and environmental hygiene are essential for reducing rodent pressure and are routinely applied by pest controllers. However, survey data and independent assessments confirm that these cannot control established infestations or address high rodent population pressures (Analysis of Alternatives, 2024)

Without SGARs as a core intervention, these approaches lack the speed, scalability, and reliability needed to protect public health, food supply, and infrastructure. The following sections set out the NPTA's detailed analysis against the criteria of technical feasibility, economic feasibility, hazards and risks, availability, and suitability of alternative methods. This evidence, supported by practitioner surveys, independent studies, and regulatory data, demonstrates why SGARs remain indispensable to professional rodent control in the UK.

1 Technical Feasibility

Alternatives to anticoagulant rodenticides (SGARs) cannot deliver: the breadth of efficacy, reliability, or flexibility required for effective rodent management.

- **Cholecalciferol:** plays an important role within integrated pest management (IPM), particularly where the risk of secondary poisoning to non-target wildlife is a concern. Its alternative mode of action can reduce reliance on SGARs in sensitive sites. However, like all rodenticides, it has limitations on use, and we have only two authorized products that are available in the UK,

  Survey evidence shows that 75.2% of professionals select cholecalciferol for its reduced secondary poisoning risk, while only 4% cite affordability (NPTA, 2025). This demonstrates that it has a clear role in the pest controller's toolkit, though not as a primary replacement for SGARs.

- **Alphachloralose:** is restricted to indoor use against house mice and has no role in rat control, leaving significant gaps in efficacy. It also shows a rapid generation of metabolic resistance within a 7-day window of incomplete treatment.

- **Phosphine gas:** is highly restricted, requires specialist training, and can only be used for burrow treatments in specific outdoor situations. It is unsuitable for areas of human habitation and has limited scenarios where it can be used as an alternative.
- **Hydrogen cyanide:** gas can only be carried out to empty buildings and only a select number of people can apply the substance, so has limited use in the UK.
- **Mechanical traps:** are impractical at scale, ineffective in sewers and burrows, and limited in efficacy by rodent neophobia. They require frequent resetting, creating disproportionate logistical costs and raise welfare concerns where death is not instantaneous (CRRU, 2020).
- **Proofing alternatives:** such as steel plates and grilles, door sweeps and bristle strips, drain and sewer guards, sealing of gaps and service penetrations, rodent-proof air bricks, to name a few are important preventative measures. However, they cannot control existing infestations and are often impractical in older housing stock, food premises, or sewer systems where rodents exploit multiple access routes. In many buildings, due to the way in which they are constructed, it is not possible to achieve a complete proofing solution. Proofing therefore supports, but cannot replace, the use of SGARs.
- **Habitat manipulation:** Whilst the removal of potential harbourages and habitat management may serve as a deterrent, it doesn't provide a means to remove an infestation once established. It may increase the efficacy of other methods of control, change feeding behaviour and lower the risk of infestation in the first instance, but if the infestation is already present manipulating and environment generally only serves to change the behaviour of the rodents.
- **Hygiene improvements:** play a huge role in rodent control, but as in habitat removal above it will not physically remove an infestation, it should be used in the first instance to deter activity and then to support the efficacy of a rodent control program using rodenticides and traps.
- **IPM (Integrated Pest Management):** brings together these approaches proofing, habitat manipulation, hygiene, and non-chemical tools and is a cornerstone of The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK. However, IPM relies on rodenticides as the ultimate measure of last resort. Without SGARs in the toolbox, IPM becomes incomplete, as non-chemical interventions alone cannot reliably eradicate established or large-scale infestations, especially in sensitive environments such as food production or sewers.
- **Shooting:** can provide immediate removal of visible rats in specific rural situations, but its application is highly limited. Rodent behaviour is unpredictable, meaning target animals may not present themselves, and the method has no application for mice. Safety concerns, public perception, and restrictions on use in sensitive or high-risk environments further limit its role.
- **Dogs and ferrets:** can be effective in rural settings for rat control, but they are unsuitable for most commercial or domestic premises. Their use raises biosecurity issues in farms and animal husbandry sites, and they are impractical for sensitive locations such as food premises or hospitals. Importantly, they have no real role in mouse control, restricting their contribution to niche circumstances only.

By contrast, SGARs are available across multiple active substances and formulations (grain, pasta, wax, gel), enabling professionals to adapt to resistance profiles, infestation size, and environmental constraints. They remain the only proven tools (NPTA, 2025) capable of delivering consistent, scalable, and not deemed inhumane by the Cruel Poisons act, to rodent control across all rodent species and environments.

The overall conclusion of the analysis is that anticoagulant rodenticides cannot be substituted in the short or medium term. None of the alternatives assessed can provide the same level of efficacy, reliability, and practicality across the full range of use situations (Analysis of Alternatives, 2024). Importantly, SGARs combine proven field efficacy with relatively low application rates and delayed time-to-death, which limits bait shyness and reduces the duration of exposure for target animals. Their LD_{50} values, while variable between actives, are well characterised and supported by the availability of an antidote (vitamin K1), providing professionals with both predictable outcomes and an additional margin of safety

Supporting evidence: NPTA Response (2025), Sections 2–4; Analysis of Alternatives (2024).

2 Economic Feasibility

The economic implications of replacing SGARs with alternatives would be severe, both for pest controllers and for wider society:

- **Product costs:** Non-anticoagulant baits are up to five times (NPTA, 2025) more expensive than SGARs to purchase on a like-for-like basis. A treatment program costing £200 with SGARs could cost £1,000 or more with alternatives such as trapping.
- **Labour costs:** Traps and other mechanical methods require frequent resetting, regular inspections, and additional travel, raising costs far beyond the price of bait (NPTA, 2025). NPTA analysis shows the true operating cost of a pest controller is £50–£65 per hour, excluding profit. This makes trap-based control disproportionately expensive compared with SGARs.
- **Service affordability:** Increased costs would either reduce the viability of smaller pest control companies or be passed on to customers. Local authorities, food producers, and households would face higher costs, with affordability particularly affected during ongoing cost-of-living pressures. Several food standards dictate that daily checks are required when using traps to control rodent activity (Food standards TESCOs 2025).
- **Knock-on effects:** Reduced affordability risks higher rodent populations, increased disease transmission, and long-term public health costs, which far outweigh any savings from restricting SGARs (CRRU, 2024).

The Analysis of Alternatives (2024) reached the same conclusion: alternatives require higher application frequency, greater labour input, and substantially higher treatment costs at scale. This mirrors NPTA's findings that non-anticoagulants are up to five times more expensive.

"For most alternatives, treatment costs are substantially higher due to increased labour requirements and limited efficacy, making them economically unfeasible as large-scale substitutes for anticoagulants" (*Analysis of Alternatives, 2024*).

Supporting evidence: NPTA Response (2025), Section 3; Analysis of Alternatives (2024).

3 Hazards and Risks

All rodent control methods carry hazards, but the balance of risks differs between SGARs and alternatives:

- **Non-target species (wildlife):** SGARs are classified as persistent, bioaccumulative, and toxic, which is why they are under review. These risks are managed in the UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK, which requires training, environmental risk assessment, and minimisation of exposure to non-targets such as birds of prey. Alternatives such as cholecalciferol and alphachloralose generally have lower long-term environmental impacts, but they provide fewer formulations and more limited flexibility, reducing professionals' ability to tailor safe, effective solutions. The evidence shows that practitioners already use a risk-based approach to minimise non-target impacts, choosing actives carefully according to site conditions (NPTA, 2025).
- **Animal welfare:** Glue traps may cause unnecessary suffering where death is not instantaneous. Sticky boards are now very highly regulated, requiring licenses for specific addresses and reliance on break-back traps risks further welfare scrutiny.
- **Public health:** Reduced efficacy of alternatives would drive higher rodent populations, increasing zoonotic disease risks such as leptospirosis, salmonella, and hantavirus.

Supporting evidence: NPTA Response (2025), Section 4; Analysis of Alternatives (2024).

4 Availability

The availability of alternatives is extremely limited, both in range and supply chain resilience:

- **Cholecalciferol:** Only two authorised products exist in the UK, supply has already proven fragile, with Harmonix unavailable for several weeks in 2025, forcing pest controllers to delay work or revert to AVKs.
- **Other alternatives:** Alphachloralose is restricted to mice indoors only; phosphine gas is highly regulated, unsuitable for areas of habitation and areas close to water courses; traps are impractical in large infestations or specialist environments such as sewers and food facilities.
- **Sustainability:** Over-reliance on such a narrow product base risks major control failures if even one supply chain disruption occurs. By contrast, SGARs are produced across multiple active substances and formulations, ensuring resilience, flexibility, and long-term sustainability (CRRU, 2020).

The **Analysis of Alternatives (2024)** raised the same concern: over-reliance on one or two actives cannot provide long-term sustainability or supply chain resilience.

Supporting evidence: NPTA Response (2025), Section 5; Analysis of Alternatives (2024).

5 Alternative method suitability

Traps as Alternatives

Mechanical and digital traps have an important role within integrated pest management (IPM), particularly in sensitive environments where rodenticide use must be minimised. However, they cannot serve as a full replacement for SGARs:

- **Labour and cost burden**: Each successful trap event requires approximately 0.25 hours of technician time for removal, resetting, and disposal (Analysis of Alternatives, 2024). When scaled across large infestations, this results in unsustainable labour costs. NPTA analysis confirms the true cost of a technician is £50–£65 per hour, making trap-based programmes disproportionately expensive compared with SGARs.
- **Efficacy limitations**: Independent EU field trials with traps meeting NoCheRo (Guidance for evaluation of rodent traps, 2021) standards failed to achieve the regulatory benchmark of 90% population reduction, instead reaching only around 70% for mice, with even lower success for rats (Analysis of Alternatives, 2024). SGARs, by contrast, consistently deliver the required level of control across all environments.
- **Behavioural and technical issues**: Trap efficacy is influenced by rodent species, sex, age, and environmental conditions such as vegetation and humidity, leading to inconsistent outcomes and trap shyness (Analysis of Alternatives, 2024). Mechanical failures ("miss-hits") are also reported, injuring rather than killing rodents and occasionally harming non-targets, including pets and wildlife.
- **Animal welfare concerns**: While some traps are certified under NoCheRo welfare guidance, many in circulation are not. This raises concerns about avoidable suffering, particularly where rodents are struck but not killed outright (Analysis of Alternatives, 2024).
- **Cost comparison**: SGARs remain more cost-effective, with treatments costing EUR 0.10–0.90 per unit compared with EUR 1–2 for snap traps and EUR 250–500 for digital traps, excluding ongoing labour input (Analysis of Alternatives, 2024).

Conclusion on traps: Traps remain useful supporting tools within IPM, particularly for monitoring and in highly sensitive sites. However, evidence from both practitioners and independent EU analysis demonstrates they cannot deliver the breadth, reliability, or affordability of SGARs. They increase labour, raise welfare concerns, and fail to achieve regulatory efficacy thresholds under field conditions.

Proofing as an alternative

Proofing and exclusion to deny rodents access is essential within a robust IPM program. Rodents have an innate foraging nature which they will exploit to gain access to shelter, more clement conditions, food, water or away from predators. The following points are a discussion of why exclusion cannot be the only option for pest management professionals and a replacement of SGARs:

- **Lack of rodent exclusion during a build and refurbishment**: There are no requirements within UK building regulations to exclude rodents during the build or a subsequent refurbishment. Rodents can easily exploit access points when pipes or conduits are not completely sealed and use these omissions to move between different areas of a building. Once inside, rodents may not leave, or they may use the same ingress point to obtain food, for example. Rodents are nocturnal by choice and this ingress may not be noticed, necessitating a management plan. Sealing the access point immediately may lead to a rodent

being trapped inside which is more deleterious. The use of SGARs to manage the infestation and then subsequently seal the access points would be the optimum solution.

- **Rodents can access through proofing**: The base of a poorly fitting door may have brush strip or excluder strip fitted. It is common for pipe and conduit access points to be sealed with expanding foam or mastic. External buildings may have wood to exclude gaps. A rodents incisors grow continuously and they will chew into likely substrates to wear these down. The positioning of the incisors means that the rodent will not ingest the material. A rodent can easily chew through the proofing examples mentioned above and access into a building. This will necessitate a management plan to remove the rodents and then effectively seal the ingress points.
- **Access through damaged drains and pipes**: Over time the drain back flow valve may become worn or sometimes the fitting is omitted. This may allow access for rats into the buildings drainage system or the building itself. Pipes may become damaged due to subsidence, construction or age allowing rat access. The damage can be repaired, but to remove the rodent problem, in this situation SGARs are the only option.
- **Complexity of building design**: In city centres and industrial complexes multiple buildings or rooms may be interconnected for services such as water or basement access. Some historical buildings may have been refurbished many times or converted for different use. This may lead to the problem of areas being near impossible to rodent proof effectively.
- **Ability of rodents to exploit open doors**: All industrial buildings will need to have a door or shutter open for access, which a rodent will exploit. Farm buildings may need to have doors open for an extended period of time, for animal or machine access. Again, rodents will exploit this. In these complex scenarios, SGARs may be the optimum riddance option.

Conclusion on proofing: Exclusion and proofing is without doubt essential within an IPM program. But, it will not prevent a persistent rodent from entering and becoming established on or within a site. Rodenticides and particularly SGARs will be appropriate to manage the problem, whereupon diligent exclusion by a pest professional can be implemented. Even with many levels to IPM, there is always a risk that rodents will still enter long term.

Habitat management as an alternative

Habitat management is another essential component of integrated pest management (IPM). By reducing food availability, water sources, and harbourage opportunities, it can reduce the likelihood of infestations developing. However, as with traps and proofing, it cannot serve as a stand-alone replacement for SGARs:

- **Food source reduction:** Good waste management, proper food storage, and prompt clearance of spillages are vital in discouraging rodent activity. However, rodents are highly opportunistic and resilient, often exploiting even trace amounts of food waste. In urban environments, overflowing bins, compost heaps, or bird feeding practices can sustain significant rodent populations despite hygiene measures.
- **Harbourage removal:** Cutting back vegetation, removing stacked materials, and improving site tidiness can reduce rodent harbourages. Yet, rodents are adaptable and can rapidly

relocate or establish new harbourages in drains, cavities, or adjacent properties beyond the control of site managers.

- **Environmental manipulation:** While altering habitats can make conditions less favourable, it does not eliminate an established infestation. Rodents displaced by habitat management alone typically relocate, continuing to cause problems elsewhere on-site or nearby.
- **Dependency on external actors:** Effective habitat management often requires cooperation between multiple stakeholders (households, businesses, councils, and landlords). Inconsistent implementation across boundaries creates opportunities for rodents to persist, undermining efforts at individual sites.

Conclusion on habitat management: Habitat management is a vital supporting measure and improves the long-term success of control programmes. However, it cannot on its own resolve an active infestation, nor can it deliver the rapid, scalable control required in high-risk environments such as food premises or urban infrastructure. SGARs remain necessary for achieving effective eradication, after which habitat management can support long-term prevention as part of a wider IPM strategy.

Integrated Pest Management

No single management method can be relied upon for effective pest management of rodents and therefore, professionals in pest management use an Integrated Pest Management approach. This uses a combination of methods and techniques to suppress the rodent infestation at many points, including, their feeding locations, their movement and routes and by lowering numbers. Using a multidisciplinary approach has been proven to lead to quicker and longer-term reduction of the rodent population and without this approach rodent populations soon return to pre-treatment levels (Timm. R., 1994). By focusing on just one aspect of rodent management whether it is chemical, physical or habitat modification, an efficacious plan can't be carried out. Each by themselves would either be impractical, expensive or a higher risk to the environment, therefore always a combined approach using IPM is needed.

Anticoagulant rodenticides remain a pinnacle tool in IPM, without their intervention, rodent infestations would persist and even grow due the nature of the fast reproductive cycles of rodents. Furthermore, the plethora of sources of food and harbourage rodents will rely upon in both urban and rural areas by both being true omnivores and animals that will nest in multiple locations lead to using non-lethal methods being ineffective. To protect public health, food products and infrastructure pest management has to be prompt and the use of chemicals in the right situations offers this solution. Speed and efficacy are essential elements to a pest management programme, to not incur further destruction and contamination and without the use of chemicals, there is a higher risk to people, animals, the environment and food chains.

Lethal methods must remain in place as to truly reduce a rodent population as long as they are used in a professional manner which the Pest Management Industry has employed itself to do. The industry has self-regulated itself to ensure that anticoagulant rodenticides are not the sole tool used by professionals to not have over reliance on them. By putting in these robust measures, the professional workforce will be some of the most skilled workers both historically and in the world and know the importance of using them correctly.

The future challenges present in rodent management is truly a lack of available tools that effectively target the pest. As a whole the industry is trying to develop new tools to circumnavigate the rodents behaviour to adapt and exploit different situations. Therefore, there is a strong argument to not limit

the tools but broaden them to be able to deal with the consequences of behavioural and chemical resistance present across the UK rodent population. Anticoagulants are suitable for both these challenges by one being available in a high range of formulations that have a high palatability to rodents and that no other chemical class can provide. Secondly, by having active ingredients available that have no rodenticide resistance. Consequently, anticoagulants rodenticides must remain in the UK market because they offer they can offer the right solution in many different solutions to support and Integrated Pest Management programme.

Shooting as an alternative

The targeted use of air rifles or firearms is an appropriate technique within IPM in some specific situations. This management technique does have benefits but also many limitations. Below are the main reasons why shooting cannot be a substitute for SGARs:

- **This technique is appropriate when the rodent is active and seen**: Shooting rodents will give an immediate kill and the carcass can be removed from the affected area. But, in many situations, rodent behaviour is very unpredictable, and the rodent may be harbouring in an inaccessible area. Therefore, there can be no guarantee that the problem rodents will be seen, even if the pest professional waits for a very extended period. The effectiveness of the management program can be augmented by night vision goggles, binoculars or laser sighting but there is still no guarantee that the rodent will be sighted. The cost of a shoot can be low if the pest professional can attend site and remove the problem immediately. If they have to attend site for an extended time on multiple occasions the cost becomes comparable to an IPM baiting program.
- **Risks from shooting**: Shooting has inherent risks that can be managed but not negated. There is a strong public perception, even negative about the use of shooting as a management technique. This may preclude it from some locations, even if the management program is completed at night or out of the hours of site operation. Also, it's possible that the work area may not be viable to be made safe for the shoot and there may be an inherent risk of the police and firearms team being called resulting in bad publicity. Other more specific risks such as ricochets and blood spatter from rodents may be an unmanageable risk in a food factory for example. Stray pellets may also present a risk.
- **Permission to shoot:** Some specific areas will be extremely reticent to allow and will even prohibit shooting. Examples are air side at airports, even the entirety of some airports. Transport systems will be the same and the urgency of some rodent activity will not allow immediate closure of the location for the works to be completed.

Conclusion on shooting: Shooting may be an appropriate part of IPM, especially in some rural environments where conditions allow. However, it can never be guaranteed that a rat will present itself at the right time in the right location to allow a safe and effective removal. More importantly, this approach applies only to rats and has no application for mice, making it very limited in scope. Biosecurity issues on farms and animal husbandry sites also restrict its suitability, and in many sensitive commercial or domestic settings, the presence of firearms would be entirely unacceptable. For these reasons, shooting cannot be regarded as a viable substitute for SGARs in the majority of professional pest control scenarios.

Dogs and ferrets as an alternative

The use of trained dogs and ferrets is one of the oldest rodent management techniques. The main advantage is that there is no equipment nor residue left from the treatment program. The rodent will be removed from site. There are some key site constraints that will not allow these to be used. The below points are a discussion of these.

- **Appropriateness to use animals on site**: Ferrets and dogs are used almost exclusively in rural settings where animals are already accepted or permitted. Their use will not be allowed, or it will not be appropriate to use a trained dog or ferret in a shop, factory, nor hospital as an example. The risk of contamination, or of the animal entering another area of the site is too high. Some appropriate sites may have risks that are too high for the animal or handler, so a program cannot be implemented.
- **Ability to train, handle and house the dog or ferret**: Extensive training is needed to manage the behaviour of the dog or ferret to find and remove the problem rodent. Only some animals may take on the training and their behaviour can change over time which can affect IPM mid program or long term.
- **Behavioural change in rodents:** Rodents have been known to avoid an area or re locate when dogs are introduced as part of a program. The animal may not be able to manage some locations due to physical limitations, safety or risks to the handler. Trained animals cannot be left in situ to manage a long-term infestation nor prevent ingress of new rodents.

Conclusion on the use of trained dogs and ferrets: The use of trained dogs and ferrets can be effective in specific rural settings as part of an IPM program. However, this technique is largely restricted to rat control and has no real application for mice, which significantly limits its usefulness. Additionally, bringing “control animals” onto farms, food production sites, or animal husbandry environments raises serious biosecurity concerns, while most sensitive or high-risk sites would not permit their use at all. For these reasons, while dogs and ferrets may play a role in niche circumstances, they cannot be considered a practical or scalable alternative to SGARs.

NPTA Response (2025)

The NPTA's survey evidence, which was collated from surveying 188 pest controllers, provides a clear insight which demonstrates that there is currently no suitable alternative to SGARs. Restricting them would undermine public health, escalate costs, reduce welfare outcomes, and weaken the UK's resilience against rodent-borne threats.

This conclusion is independently supported by the *Analysis of Alternatives (2024)*, submitted during the EU's anticoagulant renewal process, which found that while alternatives such as cholecalciferol, alphachloralose, phosphine gas, and traps may contribute to integrated pest management, none can match SGARs for consistency, scalability, or reliability in real-world rodent control.

1.Necessity of AVKs in Professional Pest Control

Survey results confirm that **96.2%** of respondents had to use SGARs because no other management method was effective or lowered the risks.

This demonstrates that SGARs are not a matter of convenience but essential interventions where alternatives fail. Importantly, these decisions are guided by site-specific risk assessments:

- In domestic settings, SGARs may be required to ensure rapid control where infestations pose a risk to families.
- In commercial food premises, SGARs provide the reliability needed to maintain compliance with hygiene and audit standards.
- In public infrastructure (e.g. drains, transport, utilities), SGARs are often the only viable option to prevent escalation of infestations.

Without SGARs, pest controllers would face treatment failures in critical locations, undermining both public health and food safety.

2. Resistance Issues

Survey evidence highlights the scale of the resistance challenge:

- **62.2%** reported behavioural resistance.
- **47%** have encountered rodenticide resistance, while 43.8% reported no resistance. 9.2% were unsure if they have encountered this.

Bait avoidance and behavioral resistance is a real and growing issue, making chemical diversity critical. Restricting the range of SGARs available would increase reliance on actives with limited palatability resulting in a potential increase in bait avoidance, reducing efficacy and raising public health risks.

In practice, current resistance means:

- Bromadiolone and difenacoum are often ineffective in regions with well-documented resistance strains.

- Professionals must therefore have access to single feed SGARs (brodifacoum, flocoumafen, difethialone) to achieve control.
- Equally, accessibility to active ingredients such as bromadiolone and difenacoum are vital when baiting in areas where single feed baits or cholecalciferol may be too hazardous.
- Without this flexibility, infestations would last longer, spread further, and require more site visits — increasing cost, resistance pressure, and environmental impact.

3. Why Professionals Choose Specific Actives

Survey data confirms that product choice is risk-based, site-specific, and professional:

- **Bromadiolone**: palatability (78.5%) and affordability (37.5%).
- **Brodifacoum**: resistance management (60.6%) and palatability (60%).
- **Flocoumafen**: chosen where resistance management is present (61.2%).
- **Difethialone**: palatability (51.4%) and resistance (51.4%).
- **Difenacoum**: palatability (72.6%) and affordability (42.2%).

This shows that professionals weigh **efficacy, resistance, safety, affordability, and non-target risk** when selecting actives.

Different actives are matched to different **location requirements**:

- **High-resistance sites** demand single feed SGARs.
- **Open area use and secondary poisoning risks** drives the use of cholecalciferol.
- **Cost-sensitive contracts** (e.g. local authorities) rely on affordable actives like bromadiolone and difenacoum.

This layered, professional decision-making is precisely what stewardship is designed to achieve — and it depends on the **full toolbox of SGARs remaining available**.

4. Range of Active Use in Professional Practice

Survey results clearly demonstrate that UK pest professionals rely on a wide range of active substances rather than a narrow set of products.

Active Substance	% of Respondents Using
Brodifacoum	89.20%
Cholecalciferol	80.50%
Bromadiolone	77.80%

Active Substance	% of Respondents Using
Difenacoum	73.00%
Difethialone	37.80%
Flocoumafen	36.20%
Coumatetralyl	36.80%
Alphachloralose	41.10%

This spread shows that professionals are drawing on all available actives to match control strategies to site-specific needs such as resistance management, non-target risk, and environmental conditions. Importantly, it evidences that decisions are not being made out of habit or convenience but as part of a conscious, risk-based approach under the stewardship framework.

The data further highlights the depth of this toolbox approach: 80.5% of respondents reported using three or more actives, and nearly three-quarters (72.4%) use four or more. Almost half (49.2%) use five or more actives, while one-third (33.5%) use six or more. Notably, 19.5% of pest controllers reported using seven actives, and 13.0% use all eight.

This breadth of use underscores that professional rodent control in the UK depends on maintaining access to the full range of SGARs and non-anticoagulant alternatives. Restricting SGAR availability would undermine this diversity, reducing practitioners' ability to tailor solutions and weakening the stewardship-driven balance between efficacy, safety, and sustainability. Crucially, it also demonstrates that pest controllers are making informed, risk-based choices, selecting actives not out of habit, but in response to resistance pressures, site-specific risks, and welfare considerations.

5. Formulations in Practice

Survey results show broad reliance on multiple bait formulations:

- Grain – 88.1%
- Wax blocks – 79.5%
- Pasta – 62.7%
- Gel – 43.2%
- Foam – 28.6%
- Liquid – 7.0%

This diversity ensures professionals can adapt to different environments and rodent behaviours.

Different formulations are essential for different locations:

- **Grain** is often used on rats, where block or solid baits are often avoided.
- **Wax blocks** are critical in damp or external environments where weatherproofing is required.
- **Pasta** provides an oily, highly palatable option for locations with strong food competition.
- **Foam and gel formulations** are particularly useful in cavities, drains, inaccessible areas and areas where bait avoidance is present.

Restricting SGARs would significantly reduce treatment flexibility, making it harder to match formulation to location, and ultimately undermining the effectiveness of rodent control.

6. Animal Welfare and Safety

Survey data confirms that welfare and safety considerations are central to professional pest management:

Pest controllers are not making choices out of habit or convenience — they are weighing up the risks of each active and formulation based on site-specific conditions. This includes assessing factors such as the likelihood of non-target exposure, the presence of pets or livestock, and the welfare outcomes of different control methods.

Professionals reported that their choice of products is influenced by factors such as:

- Secondary poisoning risk to non-target species.
- The need for rapid control in sensitive environments.
- Palatability and effectiveness where resistance is present.
- The balance between efficacy, affordability, and animal welfare outcomes.

This evidence shows that stewardship is working as intended. Pest controllers are already applying a risk-based approach, reserving SGARs for when they are necessary, using alternatives when appropriate, and prioritising welfare in their decisions.

- **Survey evidence** confirms that professionals consider secondary poisoning risk when choosing actives, and that this risk is a recognised and influential factor in product choice. Pest controllers are weighing this alongside resistance management, palatability, and affordability. While the survey data does not map directly onto toxicological rankings, it demonstrates that professionals are actively factoring non-target safety into their decision-making. This supports the conclusion that stewardship is working as intended, with informed, risk-based choices being made rather than convenience-driven or habitual use.

Active	**% citing secondary Poisoning***	**Dog LD_{50} (per kg) ****
Difenacoum	19.3%	200g

Active	% citing secondary Poisoning*	Dog LD_{50} (per kg) **
Bromadiolone	15.3%	200g
Flocoumafen	10.4%	1.5g
Brodifacoum	7.3%	5g
Difethialone	7.1%	160g

- * The % citing secondary poisoning risk comes from the NPTA member survey (2025). **Toxicological LD_{50} values (dogs per kilo) has been provided by BASF
- **Insight**: The most toxic SGARs for pets (brodifacoum, flocoumafen) are also those least often selected for secondary poisoning risk (7.3–10.9%). Meanwhile, actives with higher LD_{50}s (difenacoum, bromadiolone) are chosen more often (15–19.3%). This shows professionals are consciously avoiding the most hazardous actives in high-risk, pet-sensitive environments and applying alternatives where a heightened risk through secondary poisoning to non-target animals exist.
- Professionals also weigh non-target safety, with 42.3% citing cholecalciferol, 38.9% bromadiolone, and 28.9% difenacoum as examples of where this risk influenced their choice.

7. Economic Implications

Survey evidence and field experience highlight the economic challenges of relying on alternatives to SGARs. While product purchase prices vary, the practical cost of control is driven by efficacy, application rates, and labour:

- **Baiting efficiency**: SGARs typically achieve control more rapidly and with fewer repeat applications. Thereby potentially having a lower environmental profile due to the shorter practical baiting time. By contrast, alternatives such as cholecalciferol may require longer treatment times, while alphachloralose is limited to mice indoors. This can increase the number of visits needed to achieve effective control in practice.
- **Traps**: Although reusable, traps become labour-intensive in medium to large infestations. Each unit must be set, checked, and reset, which increases professional time on site. For small populations they may be cost-neutral, but at scale the labour requirements outstrip baiting efficiency.
- **Carbon and fuel context**: Every additional visit adds travel, fuel use, or vehicle emissions, even where fleets are partly electric. A control programme requiring twice the number of visits has a clear environmental and cost impact compared to one resolved in fewer site attendances.

- **Affordability:** was cited by only 4% for cholecalciferol, compared with 37.5% for bromadiolone and 42.2% for difenacoum.

In summary, while some alternatives may be cheaper per unit or in very specific scenarios, survey data confirms professionals regard SGARs as the most reliable and cost-effective backbone of rodent control at national scale, with alternatives typically used to complement rather than replace them.

Trapping as an alternative:
While trapping is sometimes proposed as a substitute for SGARs, its economic and practical limitations are significant:

- Once a trap is activated, it no longer delivers value until it is reset or replaced.
- Large infestations require multiple traps, regular checking, and frequent re-setting.
- This incurs substantial labour costs, travel costs, and additional carbon emissions compared to the efficiency of well-managed SGAR baiting.

Cost of professional time:
Recent analysis by the NPTA shows that the true cost of a professional pest controller is £50–£65 per hour in reference to rodent treatments before profit margin is added.

- Factoring this in, the cost of deploying and monitoring traps rapidly exceeds the cost of SGARs (NPTA, 2025).
- For businesses, local authorities, and households, this translates to significantly higher service bills and reduced capacity to control rodent outbreaks effectively (NPTA, 2025).

This demonstrates that while traps may have a role in integrated pest management, they cannot replace SGARs as an alternative to a affordable, scalable, and sustainable rodent control.

8. Stewardship and Best Practice

Survey data demonstrates that stewardship is embedded in daily practice:

- **Bromadiolone**: palatability (78.5%) and affordability (37.5%).
- **Brodifacoum**: resistance management (60.6%) and palatability (60%).
- **Cholecalciferol**: overwhelmingly selected for reduced secondary poisoning risk (75.2%),

These patterns show that professionals make risk-based, not habitual decisions, weighing risk, resistance, and welfare alongside cost.

The strong weighting towards risk reduction confirms that stewardship is working. Restricting AVKs would undermine this model, removing the ability to match actives and formulations to site-specific conditions.

The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK: All professional use of SGARs in the UK is governed by the **(CRRU) UK Code of Best Practice: Best**

Practice and Guidance for Rodent Control and the Safe Use of Rodenticides (July 2024) and the wider **UK Rodenticide Stewardship Regime**. This framework requires:

- Mandatory training and certification for professional users.
- Site-specific risk assessments before treatment.
- Site-specific environmental risk assessments before baiting
- Careful consideration of non-target risks and application of integrated pest management (IPM) principles.
- Limitation of baiting to the minimum necessary duration and quantity, with removal of bait after control is achieved.

Survey evidence confirms that these requirements are not only understood (CRRU, 2024; HSE, 2022) but actively applied by pest professionals in the field. Pest controllers are already choosing actives based on risk profiles, avoiding SGARs where non-target risks are high, and turning to alternatives such as cholecalciferol or alphachloralose when appropriate.

This shows that the stewardship framework is functioning exactly as intended: SGARs are reserved for when they are necessary, alternatives are used and decisions are guided by risk assessment rather than convenience.

9. Environmental Balance

All rodent control methods carry risks, but SGARs sit within a **robust stewardship framework** that manages those risks effectively. Alternatives are not risk-free:

- **Cholecalciferol** – no antidote is available, and accidental exposures in pets can be difficult to treat, making it a concern in pet-sensitive environments as well as being a endocrine disrupter.
- **Traps** – often require repeat visits, increasing carbon emissions and labour costs, and raise welfare concerns where instant kill is not achieved.
- **Glue boards** – widely regarded as carrying high animal welfare impacts.

SGARs, when used under stewardship, represent the best balance (CRRU, 2020) between efficacy, safety, environmental protection, and welfare outcomes.

Conclusion

The combined evidence from the NPTA survey and decades of frontline practice demonstrates that SGARs are irreplaceable in safeguarding public health, food security, animal welfare, and infrastructure in the UK. This conclusion is independently supported by the Analysis of Alternatives

(2024), which found that no current alternatives can provide the breadth, scalability, or sustainability required at national level.

- **Public health:** Without SGARs, rodent-borne diseases such as leptospirosis, *Salmonella*, and hantavirus are likely to rise, alongside food contamination and property damage.

- **Animal Welfare**
  SGARs provide rapid and predictable control, reducing prolonged suffering in target animals. Alternatives such as traps may raise welfare concerns when death is not instantaneous, and sticky boards are now highly regulated for the same reason.

- **Risk & Safety**
  SGARs have the safeguard of an antidote (vitamin K1), which makes accidental exposures more manageable in many cases. However, some SGARs remain highly toxic to wildlife through secondary poisoning. Cholecalciferol, by contrast, reduces secondary poisoning risks to wildlife but has no antidote and presents serious risks in pet-sensitive environments, where treatment outcomes are uncertain even at low exposures.
- **Economics:** Alternatives are up to five times more costly. Survey evidence confirms cholecalciferol is chosen almost exclusively for non-target safety (75.2%) rather than affordability (4%). SGARs remain the backbone of effective, affordable rodent control.

- **Resistance:** Nearly half of surveyed professionals encounter rodenticide resistance. Maintaining chemical diversity through SGARs is essential to prevent treatment failures.

- **Stewardship and environmental balance:** The UK Rodenticide Stewardship Regime which is coordinated and led by CRRU UK. Ensures that SGARs are used responsibly and proportionately, with mandatory training, risk assessments, and IPM requirements in place to minimise non-target exposure and environmental impact. Alternatives can have an important role in certain contexts, but they do not yet provide the same breadth, consistency, or scalability. This is why maintaining access to SGARs under stewardship is essential not because they are without risk, but because they remain the only tools capable of delivering reliable control across all environments.

- **Balanced outcomes:** SGARs, when used under stewardship, remain the only tools that combine efficacy, affordability, and the safeguard of an available antidote. This allows professionals to deliver effective rodent control while still prioritising welfare and non-target safety.

- **Availability:** Alternatives are few, restricted, and vulnerable to supply disruption. SGARs are available across multiple active substances and formulations, supported by robust supply chains.

- **Limits of physical alternatives:** Traps, proofing, and habitat management are all important elements of integrated pest management and strengthen long-term prevention. However, the evidence shows they cannot replace SGARs. Traps are labour-intensive, costly, and raise welfare concerns; proofing is often impractical in complex or older buildings; and habitat management reduces risk but cannot eradicate established infestations. These measures are best seen as supporting tools, effective only when combined with SGARs as the backbone of professional rodent control.

- **Informed professional practice:** Survey data shows pest controllers are using a wide range of actives, with over 80% using three or more to tailor solutions to site-specific conditions.

This confirms that decisions are informed, risk-based, and stewardship-led, not habitual. Restricting SGARs would narrow this professional toolbox and undermine the industry's ability to deliver effective, safe, and sustainable rodent control.

Restricting SGARs could lead directly to longer lasting and more widespread infestations, poorer welfare outcomes, and heightened risks of disease transmission. Costs would rise sharply for households, local authorities, and businesses, with smaller pest control companies most severely affected.

For these reasons the NPTA, representing nearly 1,100 pest control companies and almost 3,000 professional technicians, strongly urges the HSE to retain professional access to the full range of SGARs. Their continued availability, under stewardship, is the only way to balance efficacy, safety, affordability, and sustainability in professional rodent management.

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Supplementary documents

Attachment 1 Analysis of Alternatives (2024). Submitted during EU AVK rodenticide approval process.

Attachment_2. Report CEPA 2023 Survey of Prof.Technicians Final

Attachment_3.CEPA IPM Guidelines-EN

Attachment_4. EU-BPR Active Substances CEPA Statement