ENVIRONMENTAL RISK MITIGATION MEASURES FOR SECOND GENERATION ANTICOAGULANT RODENTICIDES: SUMMARY OF STAKEHOLDER RESPONSES

Contents

Background

In August 2012 HSE made available for comment two documents assessing the environmental risk from Second Generation Anticoagulant Rodenticides (SGARs) and proposing UK risk mitigation measures (HSE 2012a; HSE 2012b). HSE would like to thank all who were able to contribute. Fifty response forms were returned, and these stakeholders fell into the following categories:

Size of organisation:
- Self employed (6)
- Organisation with 1-9 employees (10)
- Organisation with 10-49 employees (2)
- Organisation with 50-249 employees or members (3)
- Organisation with 250-1000 employees or members (5)
- Organisation with over 1000 employees or members (8)
- Not applicable or information not provided (16)

Type of organisation:
- Industry - pest control companies and users of pest control services (14)
- Industry - rodenticide manufacturers (7)*
- Trade associations and trades unions (11)
- Wildlife organisations (2)
- Local Government bodies (7)
- Non-departmental public bodies (3)
- Non-governmental and/or academic organisations (5)
- Member of the public (1)

*(Including one organisation also providing pest control services)

This document aims to collate responses submitted by different categories of stakeholder. Each section reproduces the relevant question from the risk mitigation document (HSE, 2012b) in italics.

In addition to providing completed response forms, a non-governmental/academic organisation submitted three documents on the use of SGARs (Appendix 1), and a wildlife organisation submitted a document commenting on SGAR label phrases (Appendix 2).

Question 1: User Type
"The document proposes that SGARs should continue to be authorised for use in the UK by both professional and non-professional users.

Responses
Out of the 50 responses, **38 agreed that both professional and non-professional use of SGARs should be permitted.** However a number qualified this by proposing that non-professional use should only be permitted indoors.

The responses were categorised as follows:

	Both professional and non-professional use	Both professional and non-professional use, but non-professional use restricted to indoors	Professional use only	Did not respond on this issue
Industry - pest control companies and users of pest control services (14)	0	9	3	2
Industry - rodenticide manufacturers (7)	7	0	0	0
Trade associations and trades unions (11)	5	3	0	3
Wildlife organisations (2)	2	0	0	0
Local government bodies (7)	2	2	3	0
Non-departmental public bodies (3)	3	0	0	0
Non-governmental and academic organisations (5)	5	0	0	0
Members of the public (1)	0	0	0	1
Total respondents (50)	**24**	**14**	**6**	**6**

Additional comments
A common theme of responses was concern for the misuse of SGARs by non-specialised and non-trained professionals. A number of respondents suggested that a "general licence" system similar to that in place for bird control should be adopted.

Industry - pest control companies and users of pest control services
Seven respondents expressed concern for the use of SGARs by non-specialised and non-trained professionals. Proposals included

- redefining the term "professional user" to mean someone with substantial knowledge, training and/or experience (rather than someone who uses SGARs in the course of their work, such as a farmer or gamekeeper) (3 respondents)
- outdoor use of SGARs should require the user to gain a certificate of competence
- making the sale of professional use products to non-professionals an offence (2 respondents)

Industry - rodenticide suppliers
- the sale of professional products to non-professionals should be made an offence (2 respondents)

- products for non-professional use should be subject to restrictions on pack size and presentation (4 respondents)
- WIIS data suggest that most SGAR exposures occur because of misuse, rather than approved use

Trade associations and trades unions
- misuse of SGARs by non-specialised professionals/non-trained professionals is a cause for concern (4 respondents)
- the sale of professional use products to non-professionals should be made an offence
- pack sizes and presentation should be appropriate for non-professional users

Wildlife organisations
- as no qualifications are required, anyone can set up as a pest controller, so there is no point in differentiating between users
- product labelling should be improved

Local government bodies
- concerns were raised about the misuse of SGARs by non-specialised professionals or non-trained professionals.
- that the use of brodifacoum should be restricted to professional users only
- that there should be a clear definition of “professional”

Non-departmental public bodies
- there is no clear evidence of problems with the current position of use of SGARs by both professional and non-professionals, therefore this should continue.
- training in best practice is desirable for professionals.
- farmers should be permitted to continue to use SGARs

Non-governmental organisation and academic organisations
- there is no evidence that non-professional use of SGARs contributes to wildlife residues
- there is no evidence that resistance is associated with a particular user type
- products for non-professional use should be subject to restrictions on pack size
- better education, advice and Codes of Practice should be available
- training is more important that whether the user was paid to do the job (professional/non-professional status)

Question 2: Restrictions on Outdoor Situation of Use

"Five options for restricting outdoor use of SGARs in the UK are identified in the document:

Option	*Professional use*	*Non-professional use*
1	*All SGARs indoors only**	*All SGARs indoors only**
2	***All SGARs in and around buildings only***	***All SGARs in and around buildings only***
3	*All SGARs in and around buildings only*	*All SGARs indoors only**
4	*Brodifacoum, flocoumafen and difethialone indoors only** *Difenacoum and bromadiolone unrestricted*	*Brodifacoum, flocoumafen and difethialone indoors only** *Difenacoum and bromadiolone unrestricted*
5	*Brodifacoum, flocoumafen and difethialone indoors only** *Difenacoum and bromadiolone unrestricted*	*All SGARs indoors only**

**Where "indoor use' is considered to be 'situations where the bait is placed within a building or other enclosed structure and where the target is living or feeding predominantly within that building or structure; and behind closed doors. If rodents living outside a building can move freely to where the bait is laid within the building, such as bait in open barns or buildings and tamper-resistant bait stations placed in open areas, this is not classified as indoors.*

Responses

Among the 50 respondents, **21 supported Option 2** and **11 supported option 3.**

The responses were categorised as follows:

	Numbers of respondents preferring option					
Option number	**1**	**2**	**3**	**4**	**5**	**A different option**
Industry - pest control companies and users of pest control services (14)	1	1	7		5	
Industry - rodenticide manufacturers (7)		7				
Trade associations and trades unions (11)		6	2			3*
Wildlife organisations (2)	1			1		
Local government bodies (7)		3	2		2	
Non-departmental public bodies (3)		1				2**
Non-governmental and academic organisations (5)		3				2***
Members of the public (1)	1					
Total respondents (50)	**3**	**21**	**11**	**1**	**7**	**7**

* Includes 2 respondents supporting option 2 for non-professionals with unrestricted outdoor use for professionals. In the other responding organisation some members supported option 2 while other members supported option 3

**2 respondents proposed different options for different UK counties: for counties without extensive resistance to difenacoum and bromadiolone Option 2 should apply for difenacoum and bromadiolone and Option 1 should apply for brodifacoum, flocoumafen and difethialone; for counties where there is extensive resistance to difenacoum and bromadiolone Option 2 should apply for all SGARs.

***2 respondents proposed option 2 for difethialone, brodifacoum and flocoumafen with open area use for difenacoum and bromadiolone

Additional comments

A number of respondents proposed different outdoor use options for baits based on different SGAR active substances. Regarding the conclusion in the environmental risk document (HSE, 2012a) that it is not possible to rank the five SGARs in terms of risk, one respondent submitted a document re-evaluating a number of UK field studies conducted in the 1980s to assess the potential impact of brodifacoum and flocoumafen on non-target species (see Appendix 1b).

Pest control companies and users of pest control services

- brodifacoum and flocoumafen should only be used outdoors under special permission
- outdoor use of SGARs should require the user to gain a certificate of competence (2 respondents)
- restriction to indoors for non-professional users will prevent misuse (2 respondents) and improve resistance problems (1 respondent)

Rodenticide suppliers

- Option 2 would help control resistant rat populations (5 respondents)
- an appropriate system must be available to permit “outdoor” use (2 respondents)
- brodifacoum, flocoumafen and difethialone should be baits of “last resort”

Non-departmental public bodies

Two respondents noted that in balancing the need to protect public health with a risk to the environment some mortality in often high profile non-target species might be anticipated, and considered that increased wildlife monitoring would be required.

. In particular:

- Limiting a SGAR such as difenacoum or bromadiolone to “in and around buildings” would reduce the extent of exposure of scavengers and predators in the open countryside. All species vulnerable to secondary poisoning would benefit from this change, though species that habitually forage in areas close to buildings would remain at risk of secondary poisoning
- Extending the use of a SGAR such as brodifacoum, difethialone or flocoumafen has the potential to substantially increase the risk of exposure of non targets. Such an increase in risk would apply to all species vulnerable to secondary poisoning because, firstly, all these species will forage close to buildings at least occasionally and, secondly, it is expected that some rodents poisoned in and around buildings will move away from buildings and become available to species foraging in the open countryside. This presents a risk to species that habitually forage close to buildings, including the kestrel, fox, weasel and stoat. Particular concerns were expressed for the barn owl, red kite and polecat.
- Any change in current UK policy (i.e. from option 4) should put in place robust monitoring systems, including an approved use notification system, surveys of usage, enhancement of WIIS and PBMS monitoring schemes

Non-governmental and academic organisations

Concerns were expressed over the ability to control rat infestations in the following situations:

- open areas in urban settings such as parks, public gardens, play areas, canals, rivers and railway embankments
- refuse dumps
- fields where foodstuffs such as potatoes or sugar beet are stored away from farm buildings
- areas where livestock such as pigs are reared away from farm buildings

Other comments included:

- urban rat infestations in outdoor public urban settings (parks and play areas) are not usually resistant to first generation anticoagulant rodenticides (FGARs), so in these open areas use of SGARs would not be necessary

- if rats are not controlled in outdoor environments these areas act as a reservoir for the re-infestation of houses, buildings and stores
- a region specific approach (such as permitting “in and around buildings” for the more potent SGARs in resistance areas) is not appropriate for the overall management of resistance

  under the current UK position, resistant rats continue to be active, resulting in high SGAR loads and risk periods, with related risks of primary and secondary poisoning. However under option 2 the ability to target resistant populations with effective SGARs would lead to baiting with reduced quantities over shorter periods of time, and at reduced treatment costs. This would ease the current selection pressure for resistance as resistant populations would no longer be exposed to ineffective SGARs.
- the preferred option (option 2) would allow a wider choice of formulations as well as of SGARs and would allow the use of pulse baiting against rats, involving the application of smaller quantities of SGAR

Wildlife organisations
- there is a need to treat rat infestations in outdoor conservation areas (e.g. on offshore islands)
- the use of brodifacoum and flocoumafen “outdoors” would increase risks to wildlife
- there are no field data to assess possible risks/effects
- there are concerns over the lack of enforcement of current approvals
- as a signatory to the Birds Directive, the UK has conservation obligations
- a precautionary approach should be adopted, given the lack of current data
- “approved use” of SGARs is currently responsible for SGAR residues in wildlife
- SGARs should only be used when other control methods, including non-toxic or lower toxicity products, have been used but the infestation persists

Question 3. Definition of "Around Buildings"

“Options 2 and 3 involve restricting use to in and around buildings. The document therefore proposes the following definition of "around buildings";
"Where a rat population is living and/or feeding predominantly within 5 m of a building or other enclosed structure, and is having a significant impact on the building or its occupants. Bait stations or covered bait points should be placed around the perimeter of the building, and burrow baiting is permitted providing that it is within 5 m of the building. Baiting should not take place along hedgerows or in woodlands.”

Responses

A relatively small number of respondents (16 out of 50) agreed with the proposed definition of "around buildings". In contrast, over half of the stakeholders disagreed with the proposed definition on the grounds that if adopted along with a restriction of outdoor use to in and around buildings (under options 2 and 3) this would impair effective rodent control. Some stakeholders raised concerns over interpretation, and alternative definitions were proposed.

The responses were broken down as follows:

	Agreed with proposed definition	Disagreed with proposed definition	Did not respond on this issue
Industry - pest control companies and users of pest control services (14)	2	11	1
Industry - rodenticide manufacturers (7)	1	6	0
Trade associations and trades unions (11)	3	8	0
Wildlife organisations (2)	2*	0	0
Local government bodies (7)	4**	3	
Non-departmental public bodies (3)	2	1	
Non-governmental and academic organisations (5)	2	3	
Members of the public (1)			1
Total respondents (50)	**16**	**32**	**2**

*1 respondent suggested including the following additional restriction: "baiting should not take place along hedgerows, in woodland/scrubland or in any form of dense vegetation such as rough grassland", as these are the habitats for small mammals taken by barn owls etc.
*1 respondent suggested that the proposed definition be extended to include the baiting of open areas such as parks and gardens.

Additional comments

Pest control companies and users of pest control services
Most respondents considered that if adopted with option 2 or 3 of Q2, the proposed definition would restrict rodent control, in particular in the following situations:
- rat infestations affecting buildings and surrounding areas where rat harbourages are a distance away from the building but the rats are feeding in or around a building. From the current understanding of rat behaviour and the distance between rat harbourages and feeding areas, it was predicted that restricting of baiting to within 5 m from buildings would increase the baiting duration necessary to achieve Norway rat control and increase overall wildlife exposure.
- refuse bins and compost heaps which are deliberately located away from buildings
- remote locations, such as outdoor storage facilities, telecommunications, fisheries, harbours and piers
- public parks and picnic areas
- infestations in hedgerows and woodland

4 of the respondents who disagreed with the proposed definition supported a definition of "the building itself and the area around the building that needs to be treated in order to deal with the infestation of the building" put forward by the EU.
1 respondent proposed 10 - 15 m as a maximum distance in sites which present a public health risk.
1 respondent proposed 25 m as a maximum distance.
1 respondent proposed 25 - 35 m as a maximum distance.

1 respondent proposed a definition of “associated or likely to be associated with ingress into the building or to protect public health”.

In addition there were some concerns over interpretation/enforcement:
- the term “building” needs to be clearly defined - it is unclear whether a poultry shed in a field counts as a building
- terms such as “feeding predominantly” and “significant impact” are unclear

One respondent commented that since aluminium phosphide is currently used at least 10 m from a building, adoption of this definition would result in a zone between 5 m and 10 m from a building where neither aluminium phosphide nor SGARs are available.

Rodenticide suppliers
Some respondents stated that if adopted with option 2 or 3 of Q2 the proposed definition would restrict rodent control in the following situations:
- rat infestations affecting buildings and surrounding areas where harbourages are a distance away from the building but the rats are feeding in or around a building (3 respondents).
- parts of private gardens more than 5 m from the house
- outdoor urban settings, such as public parks and gardens

The 6 respondents who disagreed with the proposed definition all supported the EU definition of "in and around buildings".

Trade associations and trades unions
Some respondents stated that if adopted with option 2 or 3 of Q2 the proposed definition would restrict rodent control in the following situations:
- rat infestations affecting buildings and surrounding areas where harbourages are a distance away from the building but the rats are feeding in or around a building
- bird conservation areas
- around waste bins in parks and at outdoor events
- free-range pig and poultry rearing areas
- silage clamps
- hedgerows and woodlands

Five respondents supported the EU definition of in and around buildings.
1 respondent proposed 25 m as a minimum distance.
1 respondent proposed 50 m as a minimum distance.
1 respondent noted that in March 2012 the US EPA changed a restriction on outdoor rodenticide usage from “up to 50 feet from buildings” to “up to 100 feet from man-made structures”.

In addition there were some concerns over interpretation/enforcement, and the terms “feeding predominantly” and “significant impact” are unclear.

One respondent noted that it would be more difficult to comply with a 5 m restriction in outlying areas where building densities are low, whereas in inner London, 5 m from buildings would cover most locations.

Local government bodies
Some respondents stated that if adopted with option 2 or 3 of Q2 the proposed definition would restrict rodent control in the following situations:
- rat infestations affecting buildings and surrounding areas where harbourages are a distance away from the building but the rats are feeding in or around a building
- parks, gardens, lakes and watercourses heavily used by the public

It was stated that adoption of the definition would lead to inappropriate bait placement, often not in line with good practice.

Non-departmental public bodies
One respondent predicted that if adopted with option 2 or 3 of Q2 the proposed definition would restrict rodent control

Two respondents considered that the term “building” would need to be clearly defined; it was currently unclear whether or not it included:
- temporary and potentially moveable structures such as a shelter or poly tunnel
- slurry lagoons and tanks, silage clamps, silos
- temporary accommodation for animals such as tents/pens for pigs/lambs in open areas

One respondent considered that the exposure of non-target species was likely to differ significantly between temporary, open structures and closed buildings
One respondent considered that the proposed definition should be extended to include mice as well as rats

Non-governmental and academic organisations
Three respondents stated that if adopted with option 2 or 3 of Q2, the proposed definition would impair the control of rat infestations affecting buildings and surrounding areas where rat harbourages are a distance away from the building but the rats are feeding in or around a building. It was stated that from the current understanding of rat behaviour and the distance between rat harbourages and feeding areas, restricting of baiting to within 5 m from buildings would increase the baiting duration necessary to achieve Norway rat control and increase overall wildlife exposure.

One of the respondents opposed the imposition of a linear measurement but supported the EU definition of in and around buildings.
Another respondent supported the EU definition of in and around buildings or a maximum of 25 m from buildings.

Question 4. Restrictions on Methods of Bait Placement and Composition
“The document does not propose "across the board" restrictions on bait composition or methods of placement but proposes that the following phrases be included on the labels of SGARs authorised in the UK:
"Prevent access to bait by children, birds and non-target animals (particularly dogs, cats, pigs and poultry).
For use in areas that are inaccessible to infants, children, companion animals and non-target animals."

Responses

Twenty-one out of the 50 stakeholders agreed with both phrases, while 22 agreed with the first phrase but disagreed with the second phrase, raising concerns over its interpretation, practicability and enforcement.

The responses are categorised as follows:

	Agreed with both phrases	Agreed with first phrase but disagreed with second	Disagreed with both phrases	Did not respond on this issue
Industry - pest control companies and users of pest control services (14)	5	4	4	1
Industry - rodenticide manufacturers (7)	2	5	0	0
Trade associations and trades unions (11)	5	5	0	1
Wildlife organisations (2)	2	0	0	0
Local government bodies (7)	5	1	0	1
Non-departmental public bodies (3)	0	3	0	0
Non-governmental and academic organisations (5)	2	3	0	0
Members of the public (1)	0	1	0	0
Total respondents (50)	**21**	**22**	**4**	**3**

Additional comments

Pest control companies and users of pest control services
Additional comments on the first phrase included:
- "preventing non-target access" is an unrealistic demand except for burrow baiting
- why are cats mentioned – as meat eaters they are not expected to eat bait

Additional comments on the second phrase included:
- if bait is made inaccessible to non-target voles and mice, it will be inaccessible to the target rodents as well
- when treating nurseries and schools "inaccessible to infants and children" is only possible indoors in roof voids and outdoors when a high fence is present
- the option for open bait trays in suitable safe locations must be available
- it is unclear whether the use of tamper resistant bait stations would meet this requirement
- it is not required if the first phrase is complied with

Rodenticide suppliers
- The term "area" could be interpreted by the user to mean a specific room or the entire building (e.g. house) and therefore in many cases rodenticides would not be used if such a label statement is adopted

Trade associations and trades unions
- burrow baiting should be considered as a place “inaccessible to children and non-target animals”
- the proposed phrases would prevent treatment in many areas

Wildlife organisations
- the proposed phrases strongly imply that access by non-target animals can be prevented, but this is simply not true
- there should be an additional phrase “Note; Bait covering reduces the chance of most non-target species eating the poison but it will not significantly reduce the secondary poisoning of predators that eat small mammals (Barn Owls, Kestrels, Red Kites, Stoats, Weasels, Polecats etc)

Local government bodies
- it should be a requirement that bait retailers also sell/display bait boxes
- limits on quantities sold to non-professional users would be sensible (but probably impractical)
- the word "location" is preferable to "area" as often bait can be safely placed in a location within an area accessible to children, animals etc

Non-departmental public bodies
- there are constraints as to appropriate placement of bait in order to deliver effective control and this must be balanced by the need to provide protection for non-target organisms
- clear guidance on bait presentation should be included on the label, and a web link to the current advice on best practice should be added
- if adopted, the second phrase would prevent use in many areas

Non-governmental and/or academic organisations
- the proposal not to apply "across the board" restrictions on bait compositions and methods of placement is welcomed

Members of the public
- the second phrase should be amended to “For use in areas that are inaccessible to infants, children, companion animals and non target animals and owls”

Question 5. Restriction of Maximum Duration of Baiting

“The document proposes that the following phrases be included on the labels of SGARs authorised in the UK:
"In most cases, anticoagulant bait should have achieved control within 35 days. Should activity continue beyond this time, the likely cause should be determined and documented. Unless under the supervision of a pest control operator, do not use anticoagulant rodenticides as permanent baits."

Responses

18 out of the 50 stakeholders agreed with the proposed wording, while another 21 stakeholders agreed with the wording but proposed additional restrictions or requirements for permanent baiting. Some of the stakeholder concerns raised by a limit to the duration of baiting are related to the definition of "around buildings" discussed in question 3.
The responses are categorised as follows:

	Agree with all three phrases	Agree with first two phrases but permanent baiting should be subject to additional restrictions or prohibited	Disagree with phrases	Did not respond on this issue
Industry - pest control companies and users of pest control services (14)	5	3	4	2
Industry - rodenticide manufacturers (7)	2	5	0	0
Trade associations and trades unions (11)	2	5	2	2
Wildlife organisations (2)	1	1	0	0
Local government bodies (7)	5	1	1	0
Non-departmental public bodies (3)	1	2	0	0
Non-governmental and academic organisations (5)	2	3	0	0
Members of the public (1)	0	1	0	0
Total respondents (50)	**18**	**21**	**7**	**4**

Additional comments

Pest control companies and users of pest control services

Additional comments on a 35-day baiting time limit include:

- the restriction does not take account of possible re-infestation
- unexpectedly high levels of neophobia or previously unsuspected resistance to the active being used could delay control beyond 35 days
- cutting short baiting before control is achieved is considered a failure by clients
- a restriction to baiting within 5 m of a building (Q3) may delay control to >35 days
- the words "**and appropriate action taken**" should be added to the second phrase
-

Additional comments on permanent baiting include:

- permanent baiting by pest controllers should require justification (2 respondents)
- prophylactic baiting with live bait is often desired by clients
- the second phrase should be amended to require environmental risk assessment and regular site risk assessments
- permanent baiting should only be allowed if the risk from rodent re-infestation is higher than the risk to the environment

- there may be situations where “permanent baits” can be justified and where the risk they pose to the environment is minimal, such as mouse control indoors in food storage areas, or rat control in sewers
- it would only be in exceptional circumstances, where there is a constant and on-going threat of rat infestation, that permanent baiting for rats could be justified
- the third sentence is confusing and should be clarified. As the phrase stands at the moment, it appears to imply that “permanent baits” might be acceptable anywhere, so long as they are under the supervision of a pest control operator
- the words “trained professional” should be added in front of the words “pest control operator” and the third sentence should finish with “.. where the risk to the environment is minimal, such as indoors in sewers”

Rodenticide suppliers

It was stated that the proposed phrases appear to be more aimed at professional users, and do not seem relevant to non-professional users

Additional comments on a 35-day baiting time limit include:
- to the second phrase should be added "..and appropriate remedial action taken”

Additional comments on permanent baiting include:
- permanent baiting should not be conducted as a routine practice (3 respondents)
- permanent baiting should be avoided wherever possible but available as an option to deal with high risk sites and/or those sites with a high potential for reinvasion and/or those sites where quality assurance schemes require it (3 respondents)
- when necessary, permanent baiting should be undertaken only under the supervision of a pest control operator and an up to date written justification/assessment for any permanent baiting must be available (3 respondents)
- permanent baiting may be necessary to deal with re-infestation
- environmental risk assessments and regular site risk assessments should be required

Trade associations and trades unions

Additional comments on a 35-day baiting time limit include:
- the proposed 5 m restriction (Q3) would increase the time needed to control infestations
- rat infestation treatments may go beyond 35 days due to a number of factors. It is essential that the professional has the capacity to bait beyond 35 days when required. This should be justified with suitable assessments

Additional comments on permanent baiting include:
- some quality assurance schemes require prophylactic baiting
- some flexibility is needed. Most farmers use baits at certain times of year when rodents are more active, i.e. when stock is housed in winter or where grain is stored
- permanent baiting should be available for difficult sites, subject to monthly site assessments
- pulse baiting on an intense level has proved to be more effective than permanent baiting in cases where familiarity has led to ultimate avoidance of the bait
- should be subject to proper record keeping
- the internal treatment of house mice with SGARs in tamper proof monitoring points poses no environmental risk
- it would be impractical to expect pest control companies to remove internal SGAR baits from inside city centre and food manufacturing buildings, where the introduction of mice from neighbouring buildings and within stock and supplies is a constant threat
- permanent baiting outdoors is only required in exceptional circumstances, where there is a constant and ongoing threat of rat infestation

Wildlife organisations

Additional comments on permanent baiting include

- this sensible approach is supported but we would appreciate clarification on how this will be effectively enforced
- permanent baiting should never be permitted
- permanent baiting greatly increases the chances of rats and mice developing resistance to SGARs, poisoning of non-target rodents and secondary poisoning of predators
- the term "pest control operator" is meaningless, as anyone can set themselves up as a pest control operator without qualifications

Local government bodies

Additional comments on a 35-day baiting time limit include:

- sometimes larger rodent infestations take 5-6 weeks to treat

Additional comments on permanent baiting include

- restrictions may conflict with requirements on food premises to continually bait, should again be part of a wider assessment
- permanent baiting may be required by local authorities if owners of adjacent properties do not cooperate
- some infestations do not fall into easy control effectiveness or governance. e.g. rodent re-infestation of a housing estate from an adjacent rail network does not get resolved if the first party simply demonstrates the use of a control programme and refuses further cooperation. The effect is that the local authority has to compensate by maintaining permanent baiting programmes on the estate, in order to comply with the 1949 Prevention of Damage by Pests Act.

Non-departmental public bodies

Additional comments on a 35-day baiting time limit include:

- a 35 day limit may not be desirable for controlling mice indoors
- the label phrase suggested here requires documentation but does not advise any specific action as a result of documentation, or indeed what should happen to the documentation

Additional comments on permanent baiting include

measures to reduce the practice of prolonged or permanent baiting are welcomed since this is considered a major route by which residues contaminate predatory birds and mammals that prey on these animals. However the second phrase may be at variance with the objective of reducing the use of permanent baiting.

Non-governmental and/or academic organisations

Additional comments on a 35-day baiting time limit include:

- the 35 day limit would need to be reviewed and probably substantially increased if the 5 metre baiting restriction is implemented

Additional comments on permanent baiting include

- the third sentence should be amended to include "and appropriate remedial action taken"
- routine permanent baiting should not be permitted (2 respondents)
- an up to date written justification should be available for permanent baiting

Members of the public

It was considered that permanent baiting should never be permitted due to concerns for the food chain.

Question 6. Frequency of Revisiting Bait Points

The document does not propose a statutory minimum frequency for revisiting bait points, but proposes that the following phrase be included on the labels of SGARs authorised in the UK: "Search for and remove dead rodents at frequent intervals during treatment, at least as often as when baits are checked and/or replenished. Daily inspection may be required in some cases."

Responses
32 out of the 50 stakeholders agreed with the proposed wording, while 9 stakeholders agreed with the principle but expressed concerns over the cost and practicality of daily visits.

The responses are broken down as follows:

	Agree with both phrases	Agree in principle but raised concerns of cost and practicality of daily revisits	Agree but consider daily visits should be compulsory	Did not respond on this issue
Industry - pest control companies and users of pest control services (14)	8	3	0	3
Industry - rodenticide manufacturers (7)	2	4	0	1
Trade associations and trades unions (11)	9	1	0	1
Wildlife organisations (2)	1	0	1	0
Local government bodies (7)	4	1	1	1
Non-departmental public bodies (3)	3	0	0	0
Non-governmental and academic organisations (5)	5	0	0	0
Members of the public (1)	0	0	0	1
Total respondents (50)	**32**	**9**	**2**	**7**

Additional comments

Pest control companies and users of pest control services
- daily inspection would be pointless
- daily inspection for carcasses is too late to achieve the desired result, as rats and mice, together with their principal scavengers, are nocturnal
- it is better to reduce the size of the rodent populations when and where there is an early opportunity to do so in order to minimise the later toxic load on the environment
- concerns for cost implications, which could make customers try to undertake DIY control measures
- regular searches are essential, records of searches and certificates of disposal should be kept
- it is unclear as to what extent to search for dead rodents and under what conditions (daylight, non foggy days etc)
- Pest control companies may operate in large rural areas, with clients being up to 60 miles from home base. It would not be practical and very expensive to call daily to search for dead bodies, but an arrangement could be made with the client to search for bodies as appropriate
- Clients often tell pest controllers about dead bodies if found between visits anyway

Rodenticide suppliers
- the need for daily inspection should be subject to appropriate site assessment (2 respondents)
- daily inspection may be expensive and time consuming for pest controllers

Trade associations and trades unions
- while professional pest controllers may often only revisit baiting points on farms every 4-6 weeks, in some cases clients will survey sites (e.g. poultry pens) on a daily basis. Therefore if a non-specialised professional were permitted to search for rodent bodies under the general supervision of a professional pest controller this could provide a way forward
- the revisiting interval should depend on risk assessment

Wildlife organisations
- clarification is required on how this best practice guidance will be communicated and how compliance will be assessed. Acceptable levels of compliance should be set out along with details of how these are monitored and the consequences of not achieving these levels through voluntary mechanisms
- the last sentence should be replaced with "Daily carcass searching and safe disposal is required in order to minimise risk to scavengers such as red kites"

Local government bodies
- weekly visits are the norm for professionals treating indoor infestations, but in sensitive areas more frequent visits are required
- non-professional users will have no understanding of why collection of rodent bodies is important
- daily visits would be costly to the customer forcing them to DIY control, More visits means more bait down and rodents dying with a full stomach of rodenticide

Non-departmental public bodies
- compliance with instructions is the most important aspect in terms of mitigating the risks posed - not all users follow label instructions correctly

- analysis of the records of rodent control operations during the foot and mouth treatments might provide useful evidence of the most effective frequency of searching in reducing secondary poisoning
- the label should provide a link to web advice on best practice
- current practices, particularly in relation to the typical contracts operated by pest control companies, involve the initial placement of baits and then follow-up visits at 6/8 week intervals
- guidance should be given on farm disposal - would a farm incinerator be considered as an appropriate disposal route? If this were acceptable, it would ease disposal, and could more likely lead to positive behaviour

Members of the public

- Disposal of rodent carcasses should ensure that SGARs do not enter the food chain

References

HSE (2012a) Consideration of the environmental risk from the use of brodifacoum, flocoumafen, difethialone, difenacoum and bromadiolone. Health and Safety Executive (available at http://www.hse.gov.uk/biocides/downloads/er-sgar.pdf).

HSE (2012b) Environmental Risk Mitigation Measures for Second Generation Anticoagulant Rodenticides Proposed by the UK. Health and Safety Executive (available at http://www.hse.gov.uk/biocides/downloads/ermm-sgar.pdf)

Appendix 1. Additional Information Submitted by Non-Governmental/Academic Organisation

The following three documents relating to the use of SGARs were submitted during the stakeholder engagement by a non-governmental/academic organisation:

A. Critical Review of Environmental Risk Mitigation Measures

The first document commented on the proposals in the HSE environmental risk mitigation measures document (HSE, 2012b).

Comments on options on outdoor use of SGARs (Q2)
Option 2 has clear advantages over the current position (option 4) since it:
- allows all SGARs externally
- allows a wider choice of formulations as well as of anticoagulants
- would allow the use of pulse baiting against rats (application of smaller quantities of rodenticide)
- allows the external use of brodifacoum, flocoumafen and difethialone against resistant *R. norvegicus* populations

Current attempts to control resistant rats involve very large amounts of rodenticides over very long periods
- extends the risk period and potential access by non-target mammals and birds
- extends the related risks of primary and secondary poisoning
- resistant rats continue to be active, carrying maximum rodenticide loads (increased secondary poisoning risks)
- the costs in terms of labour and material are high

The use of effective rodenticides will lead to the availability of baits in significantly reduced quantities and over very much shorter periods of time, and at reduced treatment costs

Distance from buildings and comments on proposed definition of around buildings (Q3)
The home range of a Norway rat in the UK varies according to a number of circumstances (availability of food, stability and predictability of environment). Estimates of home ranges for rats in different environments range from a minimum of 8 m (in an urban area) to a maximum of 660 m (in a rural area).

- Typically in built up areas, the activity patterns of rats will extend from about 5 to 50 m around the infested area.
- In very central urban areas where the rat activity may be more likely to be associated with a drainage defect, the activity patterns may be less than 5 m, although more commonly it extends some 5 to 15 m.
- In almost all cases the exact shape and nature of the infestation will depend on the availability of cover, food and human activity patterns.

Concerns were expressed over the proposal to restrict baiting "in and around buildings" to an area at most 5m from the building perimeter (Q3). In particular:
- the proposed 5 m restriction on the "in and around buildings" situation of use is not practicable and would lead to treatment failures, with risks to the health of humans and livestock
- it would be impossible to treat a very high percentage of infestations effectively
- it would prolong treatment times, result in the use of rodenticides in inappropriate situations and would increase costs

- the extended treatment time would increase risks to non-target species and the environment
- the proposal is in direct contradiction to current good practice guidance, where the baiting is based on the pattern of activity indentified in a survey
- the enforced application of baits within 5 m of a building may not be appropriate and may place the baits in areas where there is maximum access and interference by humans and non targets

The imposition of a 5 m restriction together with the restrictions on aluminium phosphide would create a zone between 5 and 10 m from a building in which only FGARs could be used.

The Critical Review document summarised the findings of a questionnaire on the impact of a 5 m restriction on a number of urban local authorities. From the feedback to the questionnaire it was concluded that a 5m restriction would pose significant problems to the respondents and prevent them from fulfilling their legal obligations under the Prevention of Damage to Pests Act 1949.

The Critical Review document made the following recommendations:
- there should be no arbitrary restriction on the distance from buildings that rodenticides can be used
- the current EU definition is sufficiently restrictive
- if restrictions have to be made, then they should be based on known activity patterns of Norway rats and the long term experience of these involved in rat control - should allow applications within at least 25 - 35 m of a building
- the restriction of SGARs to 5 m around buildings would have a major implication on the ability of the pest control industry to control Norway rat infestations in a range of areas, such as public parks, playgrounds, canals, river banks, locks, amenity areas and similar habitats. It is not acceptable that Norway rat control could not be undertaken in these very high risk and high profile areas.

B. Critical Review of Field Trials involving the Outdoor Use of some SGARs to control Norway rats

The second document presented a re-evaluation of a number of UK field studies conducted in the 1980s to assess the potential impact of brodifacoum and flocoumafen on non-target species.

It drew the following conclusions:

- Many of the treatments in the trials did not conform to recommended use patterns and current best practice.
- The trials serve to indicate the potential impacts of incorrect application and poor practice when using brodifacoum and flocoumafen outdoors, but are not indicative of the environmental risks from the outdoor use of brodifacoum and flocoumafen to best practice guidance.

C. Draft environmental assessment guidance for rodenticide users

The third document provided recommendations on identifying alternative methods of rodent control, carrying out environmental assessments and implementing appropriate risk mitigation measures.

Appendix 2. Additional Information submitted by Wildlife Organisation

A wildlife organisation submitted a document with the following comments on current and future labels for SGAR baits:

- *Most users are unaware of the fact that the use of the product results in the widespread contamination of predators, many of which are legally protected species. Because contamination of predators is an extremely widespread occurrence* that can be predicted with certainty, regulators have a duty to ensure that potential purchasers/users are told about it.*
- *Secondary poisoning is not currently mentioned on SGAR labels. Because it is an extremely widespread occurrence* that can be predicted with certainty, regulators have a duty to ensure that potential purchasers/users are told about it.*
- *Current labelling implies that bait covering and carcass removal prevent the poisoning of non-target species. To a great extent this is not true*. Therefore, such phrases are misleading. Because it is physically impossible for bait covering and carcass removal to prevent the poisoning of non-target species, regulators have a duty to ensure that potential purchasers/users are told about the limitations of these measures.*
- *Many potential purchasers/users of SGARS do not consider alternative methods of rodent control, many of which involve less or no risk to non-targets. If SGARS were only used as a last resort there would be less resistance build-up and less secondary poisoning.*

The document proposed the following additional labelling requirements for SGARs:

(1) Owls and other raptors can be killed by the use of this product even if the instructions are strictly followed. This type of rodenticide was detected in 91% of Barn Owls analysed by the Predatory Bird Monitoring Scheme.

(2) Please be aware that this product is slow acting and rodents are unlikely to be found dead at baiting points. Typically it takes 3–14 days for poisoned rodents to die. During this time they will still be moving around the site, may move further a field and may be caught and eaten by predators such as Barn Owls. This is termed 'secondary poisoning'.

(3) Bait covering reduces the chance of non-target species eating the poison but it will not significantly reduce the secondary poisoning of predators that eat small mammals (Barn Owls, Kestrels, Red Kites, Stoats, Weasels, and Polecats etc.).

(4) This product should only be used as a last resort where other control methods, non-toxic products and less-toxic products have been recently used and a rodent problem persists.