

Fireworks and Horses

A horse owner survey



Redwings Horse Sanctuary
February 2025



Foreword

Horses play a unique and vital role in our culture, sport and economy. There are believed to be around 850,000 equines in the care of just over 330,000 horse-owning households across the UK. The number of people actively involved with horses is far higher, however, with more than 3 million people estimated to have ridden on at least one occasion in 2022 and more than 1.8 million people riding regularly. The equestrian sector contributes an estimated £8 billion to the UK economy and employs around 230,000 people.¹

Humans value horses for their strength, speed and agility, but when frightened, these attributes can lead horses to become a danger not only to themselves and their companions, but to people around them. Equids are hyper-aware prey animals who are adapted to monitor their environment continuously and use a strong flight instinct to put distance between themselves and a potential threat. They value safety, familiarity and a calm, predictable environment, meaning fireworks can be a particular challenge for them.

Horses are individuals, as are the circumstances of how they are managed and used and when and how they experience fireworks. Not all horses will react in the same way when fireworks are let off and how they have responded on one occasion is not always a predictor of how they may behave in the future. While there is anecdotal evidence of incidents resulting from fireworks being launched close to horses, there is a scarcity of data to inform discussion on the topic and to assess experiences and feelings across the equestrian sector more widely.

This report shares findings from a short survey designed to help fill some of the data gap by seeking direct responses from horse owners themselves on the issue. As expected, experiences and opinions vary, but, overall, the report suggests widespread and deeply felt concern among a large proportion of the horse-owning population over the difficulties of protecting horses from the impact of fireworks and the severity of outcomes that can occur when horses have become distressed as fireworks are let off.

As CEO of a charity that provides sanctuary to more than 1,200 rescued equines, and has suffered the deaths of three residents as a result of fireworks being let off nearby, I am only too aware of the anxiety and frustration felt by those who are committed to providing a safe, healthy environment for much-loved animals but whose ability to maintain that environment is fundamentally compromised, sometimes with serious consequences, by nearby firework displays.

Lynn Cutress
Chief Executive Officer
Redwings Horse Sanctuary

¹ British Equestrian Trade Association, *National Equestrian Survey 2023*; British Equestrian, *State of the Nation Report 2023* https://www.britishequestrian.org.uk/assets/EXTRA_Docs/Short%20State%20of%20the%20Nation.pdf

Executive summary

Redwings' Fireworks and Horses online survey collected responses between 18th December 2024 and 19th January 2025. The survey was open to anyone aged 16 or over who was based in the UK and had at least one equine in their direct care for whom they were financially responsible. The survey was anonymous and no personal information was requested.

A total of 5,128 complete and eligible responses was received and initial analysis of the data is presented in this report. Responses were submitted from across the UK and from a wide range of ages. Almost three-quarters of respondents had more than one equine in their care.

Just over 87% of respondents said they worry about the impact of fireworks on their horse(s) with almost three-quarters saying they worry 'a lot'. The noise of fireworks was cited as having the most potential to affect horses. More than 90% reported that fireworks are let off close to where their horses are kept.

Over two-thirds of respondents had experienced a horse in their own care being negatively affected by fireworks, with almost half saying this had happened on more than one occasion. More than 70% of those whose horses had been affected by fireworks hadn't been aware that fireworks were going to be used and fewer than 6% had been informed directly by those planning to let fireworks off.

Being aware of planned fireworks near to horses allows owners to attempt to mitigate the risks and more than three-quarters of survey respondents said they take steps to prepare if they know nearby fireworks are likely. However, almost 80% of those who took steps to protect their horse reported their actions were only 'slightly' or 'moderately' effective and just over 10% said the steps they took were not effective at all.

The 3,483 respondents whose own horse(s) had been impacted by fireworks reported effects including appearing nervous and unsettled, shaking, sweating, pacing, running, kicking out and attempting to escape, sometimes successfully. There was an almost equal split between responses relating to horses who were stabled at the time of the incident and those who were turned out in a paddock or other open area.

Outcomes from the impact of fireworks ranged from horse behaviour being affected beyond the display itself, sustaining injury or illness, requiring veterinary treatment and escaping their stable or paddock. In just over 10% of incidents a person was injured due to a horse's behaviour and, sadly, on just under 4% of occasions, a horse sustained a fatal injury or illness, accounting for more than 130 equine deaths.

Over 95% of survey respondents agreed that fireworks should be more tightly regulated, with almost 90% agreeing strongly with the statement. Just over 90% felt that more use of low-noise fireworks and alternatives to fireworks would benefit horse welfare.

When asked how they would like fireworks to be regulated, more than 80% of respondents said they would like their use to be restricted to organised, professional displays only. Almost three-quarters would like the noise level of fireworks to be reduced and over half would like displays to be limited to traditional events only, such as Bonfire Night, New Year's Eve and Diwali. Other common suggestions for regulation included mandating the distance that fireworks can be let off in relation to horses or animals more generally, requiring anyone planning to let off fireworks to inform people within a specific vicinity of the display, and ensuring all firework regulations are properly enforced.

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Survey development and distribution

The survey was developed by Redwings to gather evidence of firsthand experiences and attitudes of horse owners to the impact of fireworks on the horses in their care. Invaluable support was provided throughout by consultant researcher Dr Georgina Crossman.

An initial survey was piloted at the 'Your Horse Live' equestrian event in November 2024. A total of 179 responses were received from visitors to Redwings' stand and the findings are available on the [Redwings website](#).

Following a review and refinement process, the Fireworks and Horses survey was launched more widely on 18th December 2024 and distributed online using social media. There was a total of 27 possible questions using a range of question types to collect both quantitative and qualitative data. The survey was self-selecting, meaning there was no obligation to take part and participation was entirely voluntary.

The survey was housed on Alchemer survey software reached through a link that could be shared on social media, email or other digital communications. It was anonymous and no personal information was requested. Some demographic data was collected to determine the geographical spread and age range of respondents and allow opportunities for additional data analysis in the future.

The survey was shared on Redwings social media platforms, through the charity's mailing lists, industry contacts and encouraging onward sharing of the survey link. In addition, just under £500 of paid Facebook advertising targeted at horse owners was used to help increase the survey's reach and broaden the number and type of responses received. The average participation rate was just over 200 responses per day for the 33 days the survey was available.

Data limitations

As with the majority of self-selecting surveys, there is likely to be some respondent bias within the data as horse owners with strong feelings about fireworks would be more motivated to take part. This should naturally be taken into account when reading survey findings. In addition, as an equine welfare organisation that has been working to raise awareness of the impact of fireworks on horses for many years, Redwings has a clear position on the topic, and this may have affected perceptions of survey objectivity.

However, survey promotion actively encouraged responses from people with a range of experiences and views and the survey was kept short to increase appeal to those not motivated by strong feelings. Using Facebook advertising also helped to reach a wider pool of horse owners to broaden the views represented.

Redwings was also committed to carrying out fully objective and robust research to help reflect accurate and representative views and experiences from across the equine sector. Working with an independent consultant researcher ensured questions were balanced and data analysis was objective. Redwings fully appreciates fireworks hold positive and pleasurable associations for many people and wanted the survey to represent the full range of views to help inform everyone involved in dialogue on the topic.

Data analysis

After the closure of the survey, all data was downloaded from Alchemer and analysed using Microsoft Excel. Data cleaning was carried out to remove responses that had ticked the eligibility criteria box but were deemed ineligible to take part in the survey. A total of 73 responses were removed because the person indicated they were either under 16 (54 responses), weren't responsible for an equine (11 responses) or were not based in the UK (8 responses).

Further data cleaning was carried out on questions where comments provided under the 'other' option could be assigned to one of the other listed categories. Care was taken to only reassign a response when the wording or meaning was clearly aligned with one of the other options provided.

Although comments boxes were used within many of the quantitative survey questions, three questions collected only qualitative data. In total, the data contained more than 15,000 open text comments. While comments have been read and some have been quoted within the report, full qualitative analysis hasn't been carried out at this stage. The three qualitative questions are not included in this report but provide a valuable resource for potential future analysis.

Demographic data

Complete responses were submitted from all four countries within the UK. The response rate was not dissimilar to the proportionate populations of each country, with slightly more responses for England and Wales relative to their populations, and fewer for Scotland and Northern Ireland. In part, this could be a reflection on the strict fireworks regulations already in place in Northern Ireland and the introduction of new fireworks legislation in Scotland in 2022.

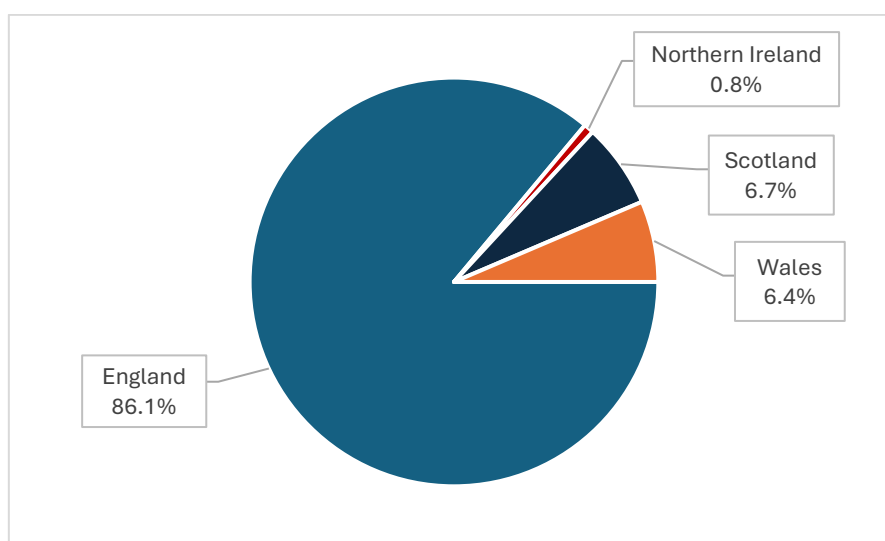


Fig 1. Respondent home country (n=5,128)

Horse owners from all eligible age ranges contributed to the survey. More than half were aged between 45 and 64 with proportionately fewer responses being submitted from younger owners.

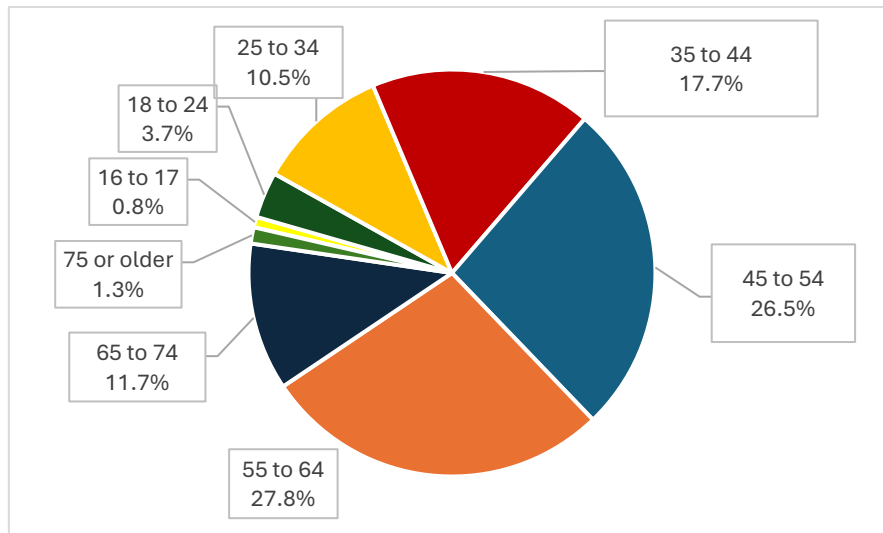


Fig 2. Respondent age range (n=5,128)

Almost a third of respondents had two equines in their care for whom they were financially responsible, and over a quarter had one equine. Just over 15% had five or more equines. Some people commented that in addition to their own equines, they had management responsibilities for other people's horses and/or other animals.

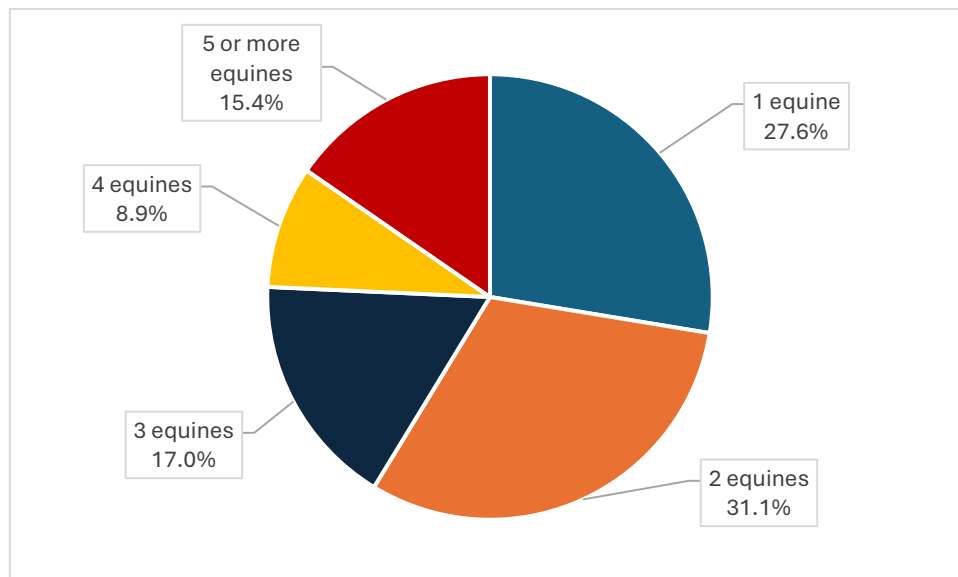


Fig 3. Number of equines in respondents' care (n=5,128)

Terminology

Although the majority of survey respondents had more than one equine in their care, the report uses the word 'horse' in the singular for clarity and consistency.

It is also important to note that while the word horse was used in the survey and this report, the survey related to all types of domesticated equidae and comments show that owners of both donkeys and mules contributed to the survey data.

In addition, while the survey refers to 'horse owners', people who cared for horses on a loan or share basis were also eligible to respond as long as they were involved in the direct care of an equine, including having financial responsibility for some or all of the costs involved.

Survey findings

Each quantitative question is shown along with a visual representation of the results, accompanied by text to draw out key statistics.

The n value for each question (the number of responses for that particular question) is shown in the title of each chart. Logic was applied to some questions so that it was only given to respondents who had provided a particular answer to a previous question, meaning that n values vary accordingly.

Some questions used a checklist format so that more than one option could be selected, meaning the total for all percentages shown in those charts exceeds 100%.

This report consists of initial findings only and more in-depth data analysis is planned, including segmenting data and conducting qualitative analysis on free text comments submitted throughout the survey. More than 15,000 open text comments were collected and this has the potential to provide further valuable insights on the topic of fireworks and horses.

Statements drawn from some of the many free text comments submitted appear as quotes within this report to provide more detail and convey more nuance than some of the quantitative data. The quotes included reflect in more detail the individual experiences of the people and horses represented within this research.

How do you feel about the possible impact of fireworks on your horse?

Just over 87% of survey respondents said they worry about the possible impact of fireworks on their horse, with almost three-quarters worrying 'a lot'.

Almost 12% reported that they didn't worry about the possible impact of fireworks on their horse, the most common reason given was that their horse wasn't bothered by fireworks (6.7%) with a further 3.7% saying fireworks weren't let off near their horse. However, more than 30 respondents used the comments to say that although their own horse wasn't bothered by fireworks, they worried about the impact of fireworks on other people's horses. Some people also expressed concern over the impact on other animals, humans and wildlife.

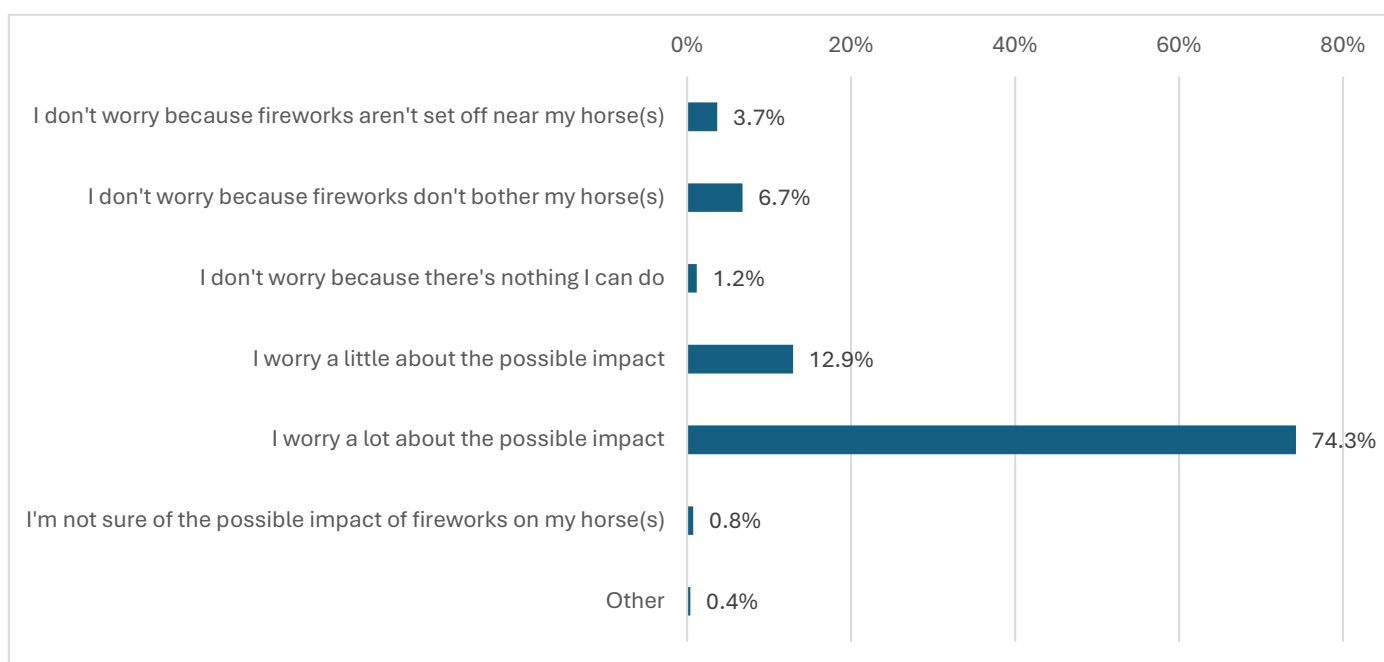


Fig 4. Feelings about the possible impact of fireworks (n=5,128)

"Mine isn't bothered about them, but I do worry immensely about the impact they have on other horses"

"I'm utterly terrified of fireworks after my horse was badly burnt by one and the stable burned last year"

"I don't worry because I believe people should be allowed to have fireworks"

"... planned displays don't worry me but the sale of fireworks to the general public very much worries me"

"Although my horses seem OK, I do get very anxious about fireworks. You never know what might happen"

"I worry a lot and have to take unpaid time off work to be there for the horses"

"I don't worry because fireworks are fun at certain times of year and the horses just have to deal with it."

"I didn't worry until my new horse died after a fireworks display next door"

Which, if any, elements of firework devices do you feel could impact your horse?

Respondents who had indicated they worried either a little or a lot about fireworks were asked which aspects of fireworks in particular they felt could impact their horse. More than one option could be selected from the list provided.

Firework noise was the most significant factor for horse owners. Almost 95% of respondents were concerned about loud bangs or explosions from fireworks and 84% felt that other sounds, such as crackles and whistles, could also be an issue.

Debris from spent fireworks and falling sparks and embers were a worry for more than three-quarters of respondents and over half felt bright/flashing lights had the potential to affect their horse.

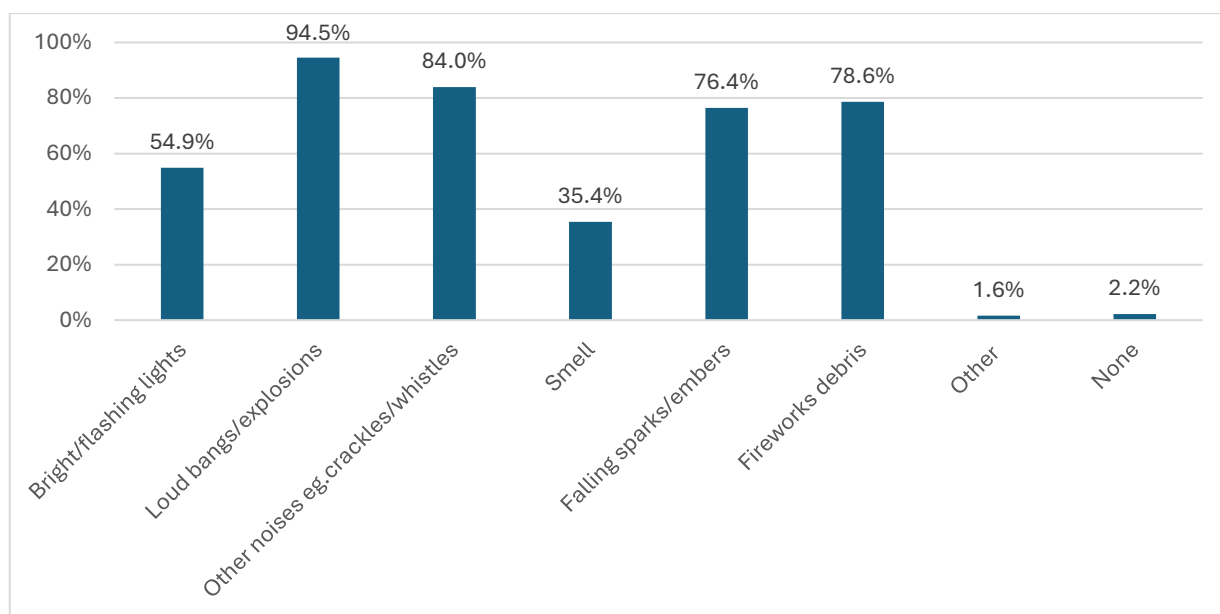


Fig 5. Aspects of fireworks respondents felt could impact their horse (n=4,468)
(Respondents could select more than one option)

“The smaller fireworks don't bother my horse but the loud rockets that explode with a bang and the constant shot ones make her stressy and on edge”

“The flashes, bangs and the smell of them creates panic!”

“Risk to horse caused by fireworks landing in the paddock or on the horse”

“Any loud noises are going to potentially scare any animal”

“I'm also terrified that falling sparks will cause a fire one day”

“People being unaware that we can't just train horses not to be afraid of overloud explosions and lights flashing across the skies”

“They are so loud these days, and continuous flashes and bangs, that go higher in the air. They also have larger area that they explode over”

Has a horse in your care ever been negatively impacted by fireworks that you are aware of?

Just over two-thirds of respondents had first-hand experience of a horse in their care being negatively affected by fireworks. Almost half had experienced their horse being impacted on more than one occasion.

A quarter weren't aware of an impact on their horse and 4.5% knew their horse had definitely not been affected. Many people are not in a position to keep horses at home, making it harder to know if their horse may have been exposed to fireworks and what, if any, impact there may have been.

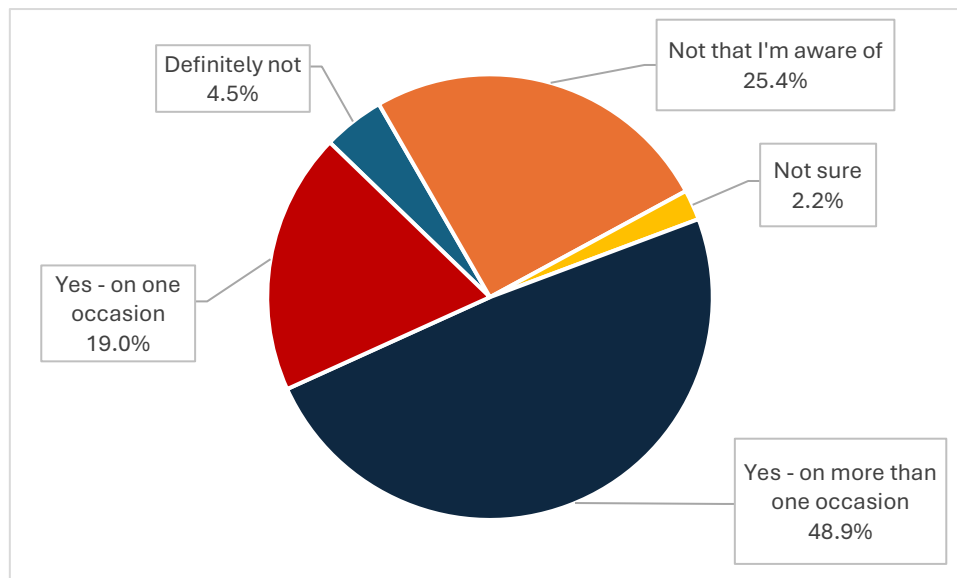


Fig 6. Has a horse in your care ever been negatively impacted by fireworks? (n=5,128)

"On five separate occasions, different horses, all noise related"

"...horses were in a barn when a stray firework set light to it"

"...horses that are in fields have had firework casings land on their rugs and melt them"

"...have owned our pony for 20+ years but she has been far worse since she had large rockets landing in her field around 15 years ago, she put herself through fencing and has been absolutely terrified ever since"

"Too many occasions to recount but minimum of 10 times a year. It's not just Christmas and New Year"

"My horse ran through a wire fence and nearly got run over due to fireworks being let off near her field"

"My rescued pony mare aborted her foal"

"Horse developed stress induced laminitis and was later destroyed because of it"

"Fireworks being set off whilst bringing the horses in resulted in horse spooking with injury to me"

"Exhausted, sweaty, nervous mess"

Incidents involving fireworks and horses

All 3,483 respondents who had had a horse in their care impacted by fireworks were asked the four following questions about their experience. Those who had seen a horse impacted on more than one occasion were asked to consider the most recent or most impactful occasion when answering these questions.

Where was your horse at the time that fireworks were being let off?

Among the survey respondents whose horses had been impacted by fireworks, there was an almost equal split between those whose horse was in a stable or building at the time of the incident and those with their horse turned out in a paddock or other open area.

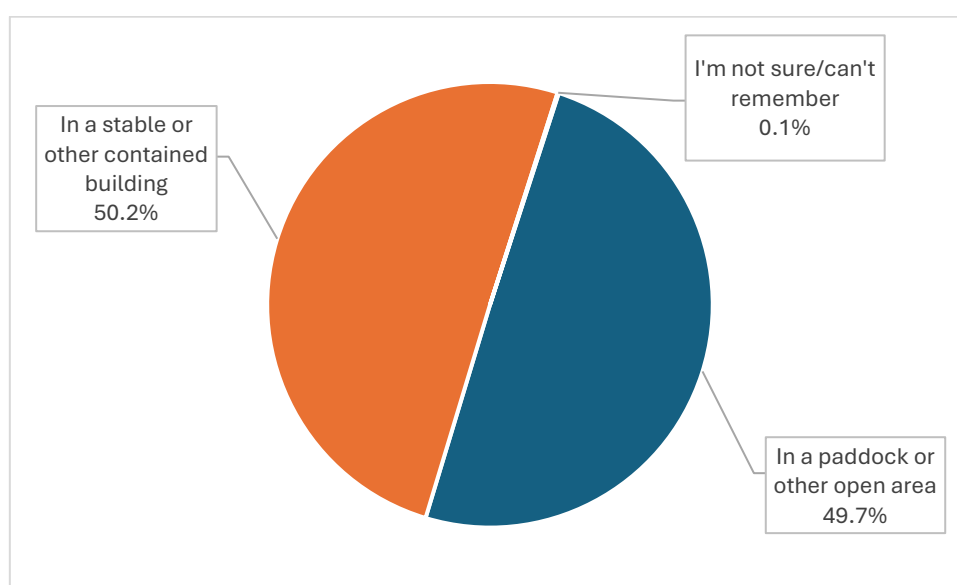


Fig 7. Horse's location at time of fireworks display (n=3,483)

Some owners will bring their horse into a stable if they are aware that fireworks are likely to be let off nearby, while others prefer to ensure their horse is turned out.

"Trying to decide if horses are safer inside or outside during the fireworks main seasons"

"We have had to turn out horses that are usually stabled as they panicked more inside"

"Bring my horse in for the night earlier than usual"

"Try and keep the horses usual routine as much as they're used to"

"Have installed camera in stables"

"Let them all stay together in the field as a herd"

"Keep all our horses & 3 cats in the barn, help keep them safe"

"Turn out as it's safer than keeping in but still has risk"

Were you aware that fireworks were going to be let off close to your horse?

More than 70% of those whose horses had been affected by fireworks had not been aware that fireworks would be let off close to their horse. Of those that were aware, in only 5.5% of cases had the owner of the horse or the yard where the horse lived been informed directly.

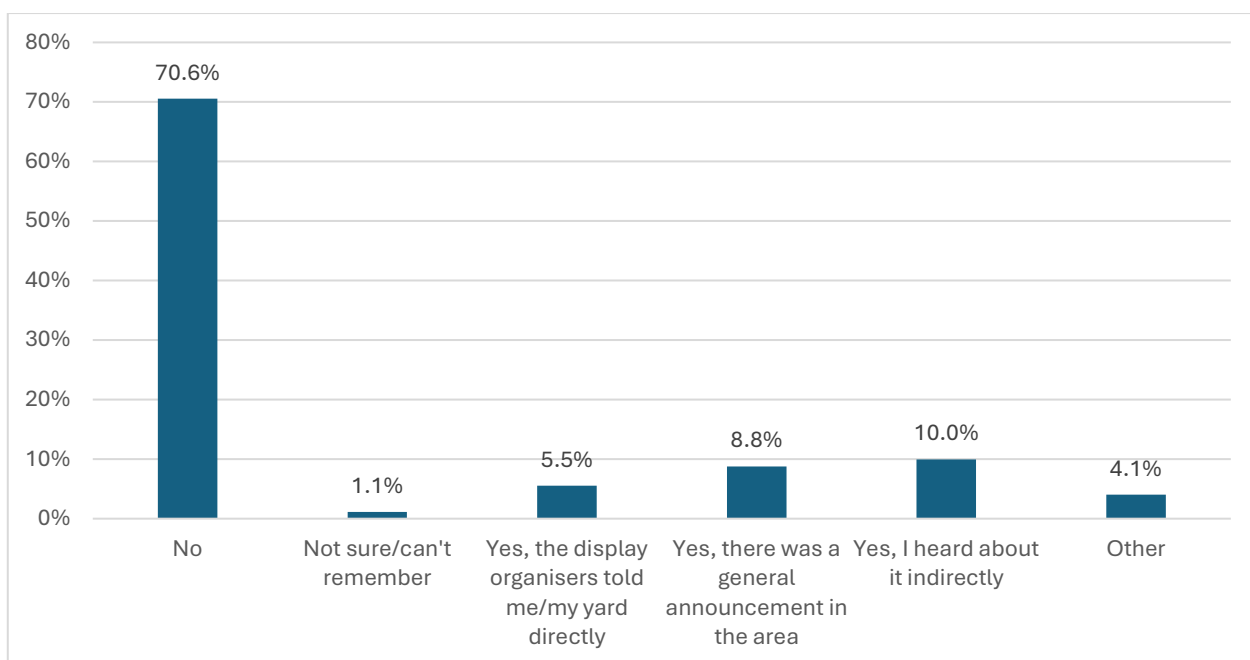


Fig 8. Were you aware that fireworks would be let off near your horse? (n=3,483)

Survey comments indicate that many horse owners assume that fireworks could or will be let off around traditional dates such as Bonfire Night and New Year's Eve, regardless of whether they are made aware of the specific time and location of displays. It's clear that owners would prefer to know when fireworks that may impact their horse are planned, with some actively seeking information to help them prepare.

However, while being aware of fireworks can help owners to reduce the risk fireworks present to their horse, or at least be present to take action if needed, the impact of fireworks may still be considerable.

"My neighbours now let me know that they are going to set off fireworks. It means I can ensure my horses are in, but they are still very upset in their stables"

"The houses were letting off next to our fields with no warning, we found out because of debris left over"

"Some people are really decent and will let you know"

"The people that owned a garden adjoining our field gave us half an hour's notice"

"Neighbours to horses don't warn us but let off fireworks beside the field"

"This year there were 15 displays over 9 days and we were warned about 3"

"There is an organised one which I can prepare for. The worst are private fireworks with no warning"

"I was told a time the fireworks were going to go off, but the display went off one hour earlier than I was told. So at the time I was bringing in my horses, one of which was recovering from spinal surgery"

What effect did you notice the fireworks had on your horse?

Survey respondents whose horse had been affected by fireworks were split into those whose horse had been stabled and those whose horse was turned out at the time. The two groups were asked to select from adapted lists to reflect behaviours that might be seen in horses reacting to fireworks within those environments. Each question allowed multiple options to be selected.

- Stabled horses

The most common behaviour reported for stabled horses was to appear very alert, nervous or unsettled, with repetitive pacing or box walking also common. Signs of more profound distress were observed by fewer respondents, though a third of horses attempted to escape (unsuccessfully or otherwise), a quarter kicked out at the walls or door of their stable and just over 16% were seen rearing and/or bucking. Almost one in five showed colic-like symptoms, such as pawing the ground, lying down and getting up repeatedly, rolling excessively, sweating or showing facial expressions associated with pain.

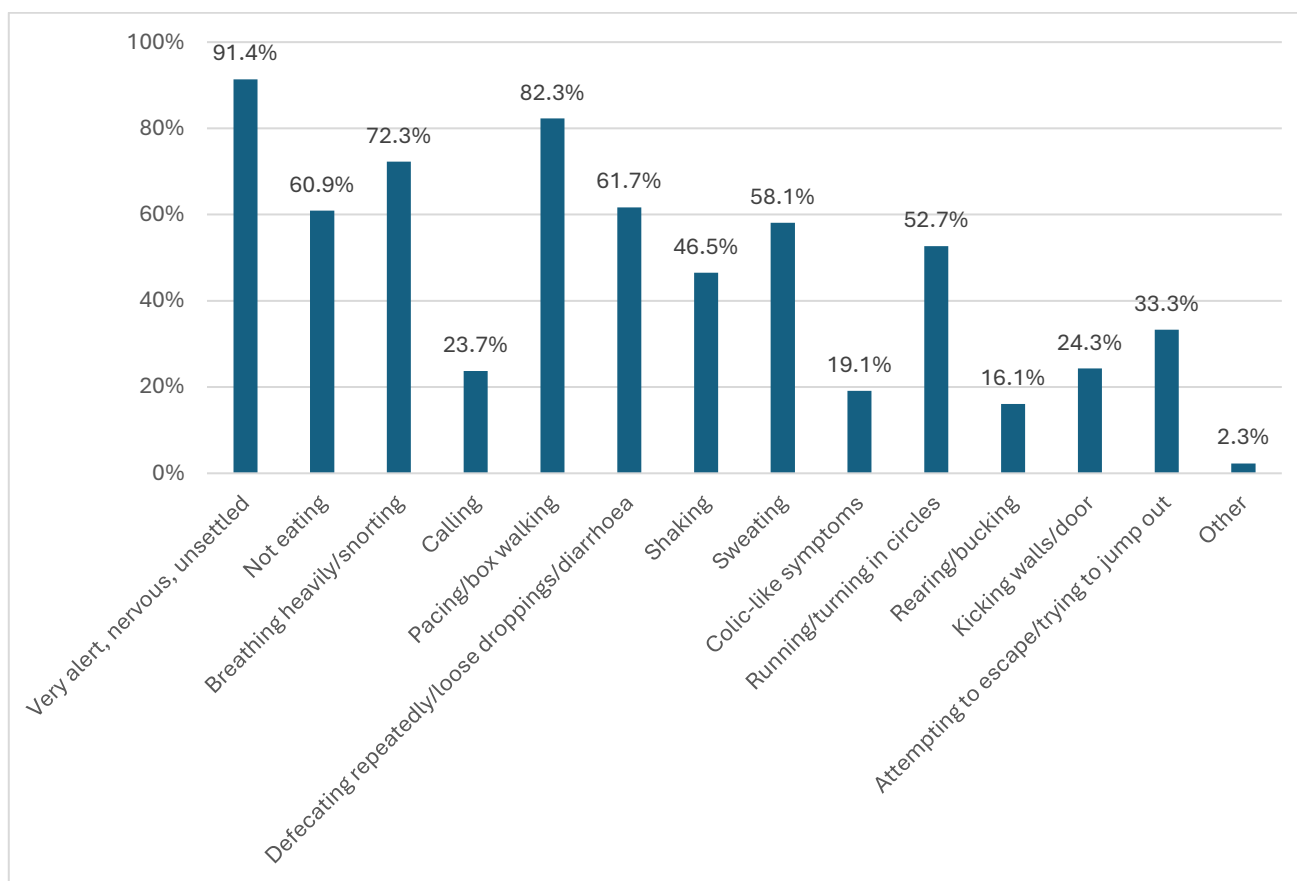


Fig 9. Noted effects of fireworks on stabled horses (n=1,750)
(Respondents could select more than one option)

- Turned-out horses

Over 85% of turned-out horses were also reported as being very alert, nervous or unsettled, with slightly more seen to be trotting, cantering or galloping repeatedly, suggestive of their flight instinct being activated. Fewer horses were reported as showing colic-like symptoms when turned out than when stabled. The number of equines noted attempting to escape from their environment was similar in both contexts at around a third, though with slightly more trying to escape from a paddock.

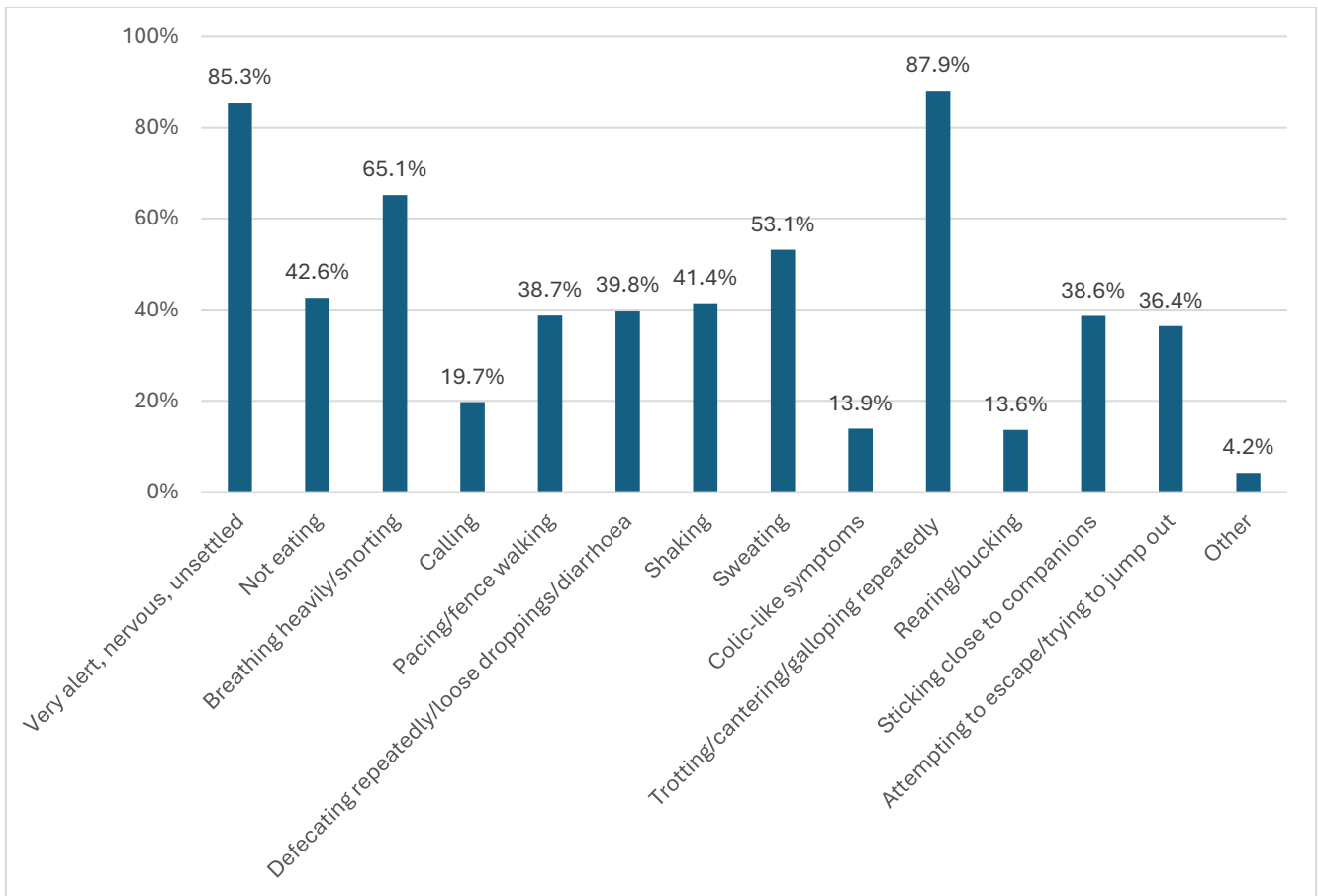


Fig 10. Noted effects of fireworks on turned out horses (n=1,730)
(Respondents could select more than one option)

“Horse broke wall in stable and escaped into the night”

“Focused on watching the fireworks and listening to them. More alert than usual”

“Squashed herself as tight as she could into corner of stable”

“Mine isn’t that worried over them except the time they were let off over the barn. Then he was worried, pacing but did settle quickly. The others in the barn on his side were stressed, bucking, pacing, rearing etc”

“I had one that would be frozen in fear. Others tanking about”

“The horses aren’t youngsters and usually pretty chilled, but they were obviously extremely distressed”

“Was competing. Bolted and threw rider”

“I wasn't at yard as not notified and they went off late at night. We found him the next morning sweaty and unable to lift his head up. He was also walking around in circles”

“He beat into the wall so many times he was bleeding from the nose and mouth”

“Wheeling round - I was walking him out in-hand at the time, potentially very dangerous”

“Rocking backwards and forwards”

“Absolute panic and flight or fight very dangerous situation”

“He was so scared he bolted through a post and rail fence, galloped on the road for a good mile, got hit by a car, ran off again, was eventually caught by a motorcyclist”

Did you experience any of the following outcomes when fireworks were let off near your horse?

Respondents whose horses had been impacted by fireworks were asked to indicate which, if any, of a range of possible more significant outcomes had affected their horse. More than one option could be selected and the question included both stabled and turned-out horses.

The most common outcome was a change in the horse's behaviour beyond the duration of the fireworks display itself. Comments show that in some cases a horse's behaviour was affected for days or even a number of weeks after the event, sometimes affecting handling or riding safety.

Around three-quarters reported at least one significant outcome. A horse escaped in just under 17% of cases, with most remaining on the property, and 4% becoming loose. Around 30% sustained an injury or illness and just over one in ten required veterinary treatment. Sadly, almost 4% of horses died or had to be euthanased as a result of the incident. In around 10% of cases a person was also injured. Nine comments submitted as part of an 'other' response reported foals being miscarried.

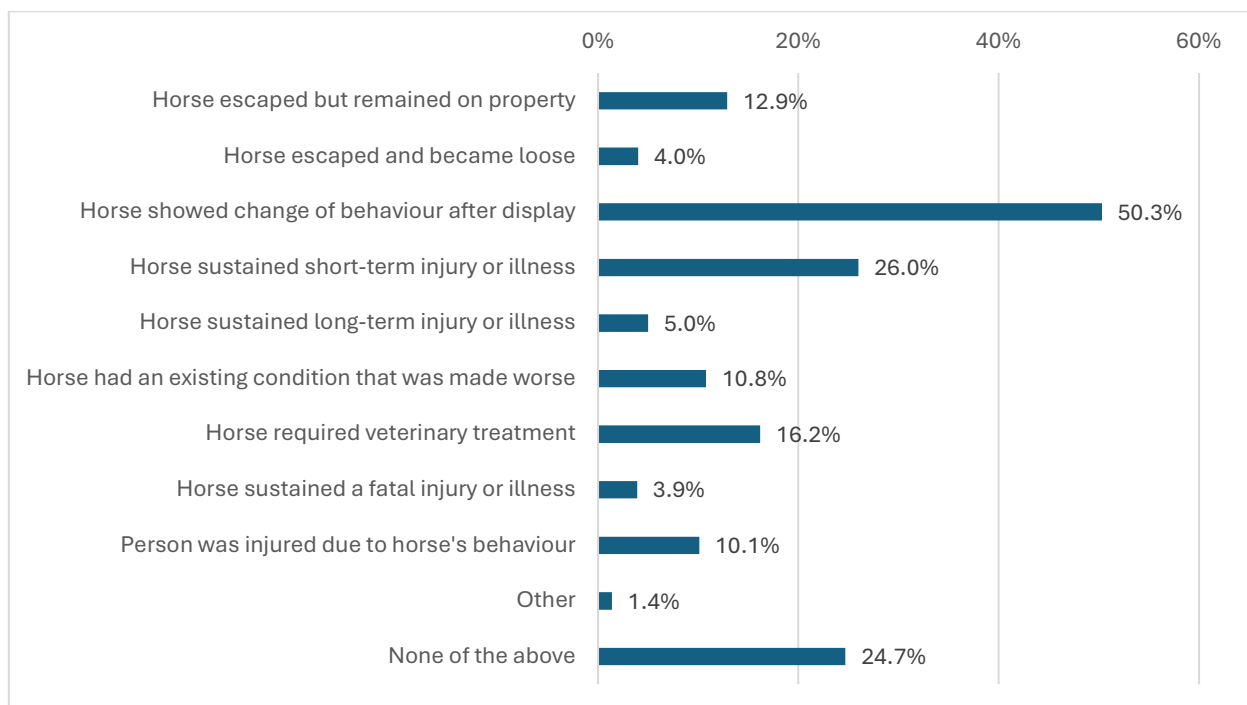


Fig 11. Outcomes of behaviours shown in response to fireworks (n=3,483)
(Respondents could select more than one option)

“My mare was distressed and uneasy for several days afterwards”

“Horse had to endure the process of having the stable doorframe dismantled so that we could free her”

“£4,000 vet bill to save his life”

“Several people including owner and one vet injured as a result of attempting to treat the horse”

“Jumped out of the stable when debris hit the roof. Ran blindly across the farm and into a big post. Had internal injuries and had to be put to sleep”

“Horse had to be sedated by vet and is now sedated every year prior to the fireworks display”

“Horse jumped out of box and ran for miles before being contained. It was never ever the same again.”

How often are fireworks let off close to where your horse is kept that you know of?

Traditional dates for this question were listed as Bonfire Night, Diwali, New Year’s Eve and Chinese New Year. Just under 40% of respondents said that fireworks were let off close to their horse three or more times a year around these dates. Slightly fewer respondents, just under a third, reported that fireworks were let off three or more times a year, but not limited to traditional dates.

A quarter of respondents dealt with fireworks less frequently, with their horse being exposed to them once or twice a year on average. Just under 4% do not have fireworks let off near their horse.

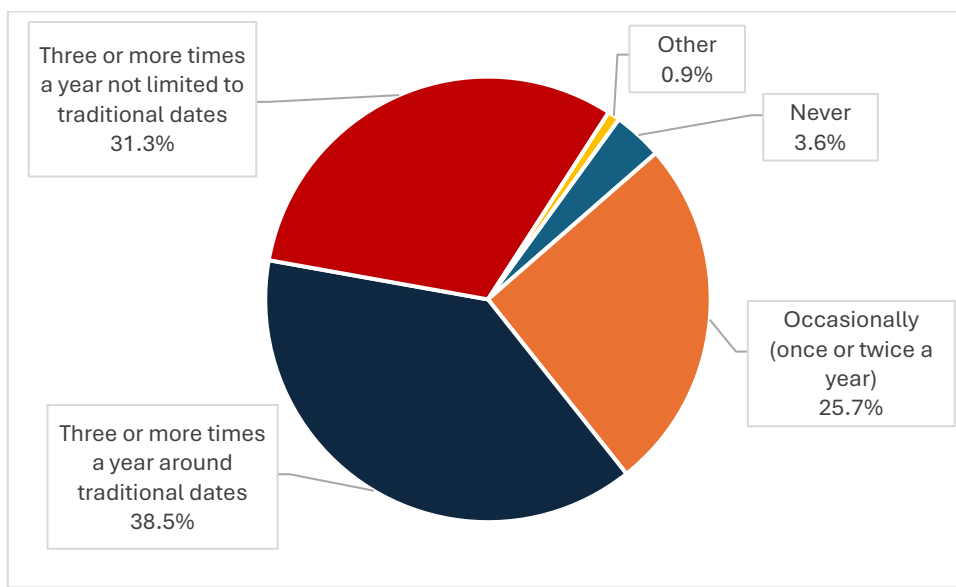


Fig 12. Frequency of exposure to fireworks (n=5,128)

“Totally random. Some years none at all. Other years very close fireworks next to our livestock”

“Around 30 times a year. Never know when it will be”

“Just celebration times New Year, Bonfire Night etc”

“At least twice a month at a local wedding venue, my horses don't bother and I have fireworks behind my stables on Bonfire Night. I inform all horse owners around me and none are bothered by them”

“In 30 years of living here only once close by new neighbours”

“Roughly every night for about a month, starting just before Diwali at the end of October and going well into mid-November. Thursday, Friday and Saturday nights being the worst”

“Every Wednesday evening and some Saturdays through the summer”

“Wedding venue uses loud fireworks, despite being asked to use silent ones, can be 3-6 times a month”

“From mid-October until New Year’s Eve we don't make plans as most weekends there are fireworks nearby... We then have fireworks going off randomly through the rest of the year”

“Not usually near me but twice this year without any warning”

What type of fireworks displays tend to be held close to your horse?

Almost half of respondents reported that private displays (such fireworks being let off in a garden) tended to be held close to their horse. Just under 40% said it was a mixture of public and private displays. Combining these responses indicates that private displays were noted by over 87% of respondents in total.

A very small number of respondents (17 people, 0.3%) said that low-noise fireworks were used close to their horse. The comments submitted by people selecting 'other' included nine mentions of children or teenagers letting off fireworks at random.

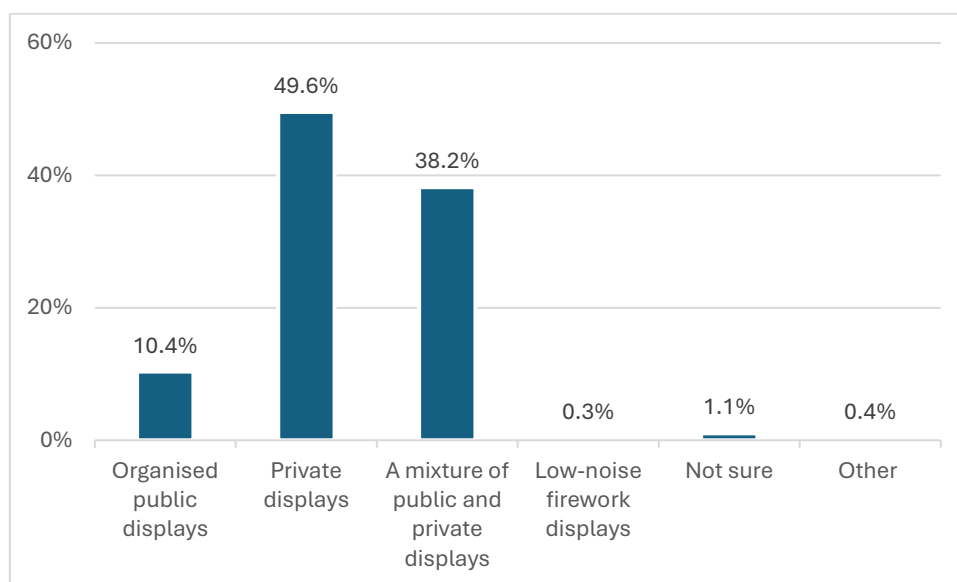


Fig 13. Type of displays experienced by respondents (n=4,969)

“Organised large professional private displays for weddings and other functions”

“Teenagers congregating in rural area letting off fireworks. Police do nothing about it”

“Fairly distant ones as most neighbours have or understand horses”

“Private displays and several country hotel/wedding venue displays”

“Mixture including the annual Fireworks Championships and the 1812 overture complete with cannons”

“It was a group of people having their own impromptu display (with some serious fireworks) illegally in someone's field next to the horses' paddock”

“Little garden fireworks for kids are manageable. Selling private households display grade rockets is NOT acceptable in 2024”

“The local pub doesn't let off fireworks just a big bonfire”

“Small self-appointed group runs a display right near 3 stable yards - open to the public”

“Small community events that have recently changed to bonfire with sparklers. Interestingly the horses are on alert from the smell of burning but not spooked”

Do you take steps or make changes to your routine to reduce the risk of fireworks to your horse?

More than three-quarters of respondents said they take steps to help reduce the risk of fireworks affecting their horse if they know or suspect displays could be held nearby. One in five didn't take steps.

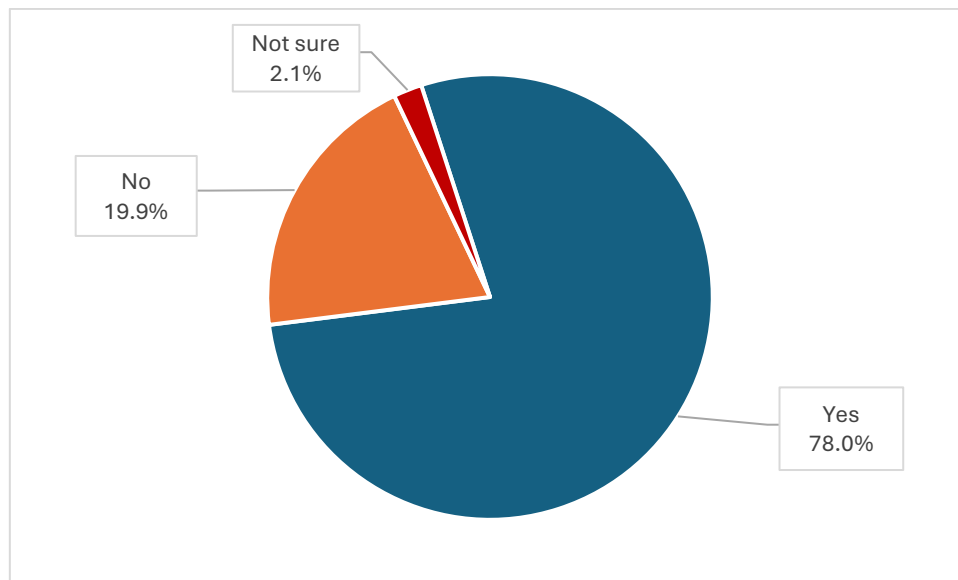


Fig 14. Do you take steps to reduce firework risk? (n=5,128)

What steps or routine changes do you make to reduce the risk of fireworks to your horse?

Respondents who said they take steps to reduce the impact of fireworks on their horse in the previous question were then asked what actions they took to help protect their horse. Twelve suggested options were provided with an additional option to write in other actions.

More than half of respondents stayed with their horse or ensured their horse was checked more often during the period when fireworks were likely to be let off. Almost half provided additional food, forage or treats as a distraction. More than 40% left music on and almost as many left yard lights on. Two comments indicated that leaving a tractor engine running is also used by some as a way of masking noise.

It was common to complete the daily routine earlier than usual so any horses that need to be moved were handled in daylight rather than after dark when fireworks could be let off. Comments indicated that for some people this involved taking time off work at a financial cost.

There are differences of opinion on whether to stable horses or turn them out as part of preparation for fireworks. Just over a third of respondents said they bring their horse into a stable when that wouldn't normally be part of their routine, comments show that a few will go further and shut the top door of the stable. However, 40 respondents used the comments box to say they specifically turn their horses out as part of preparing for fireworks.

Other actions taken included moving horses to another premises for the night or period when fireworks are most likely to be let off, driving an affected horse round in a horsebox until the display finishes and moving to a new livery yard altogether.

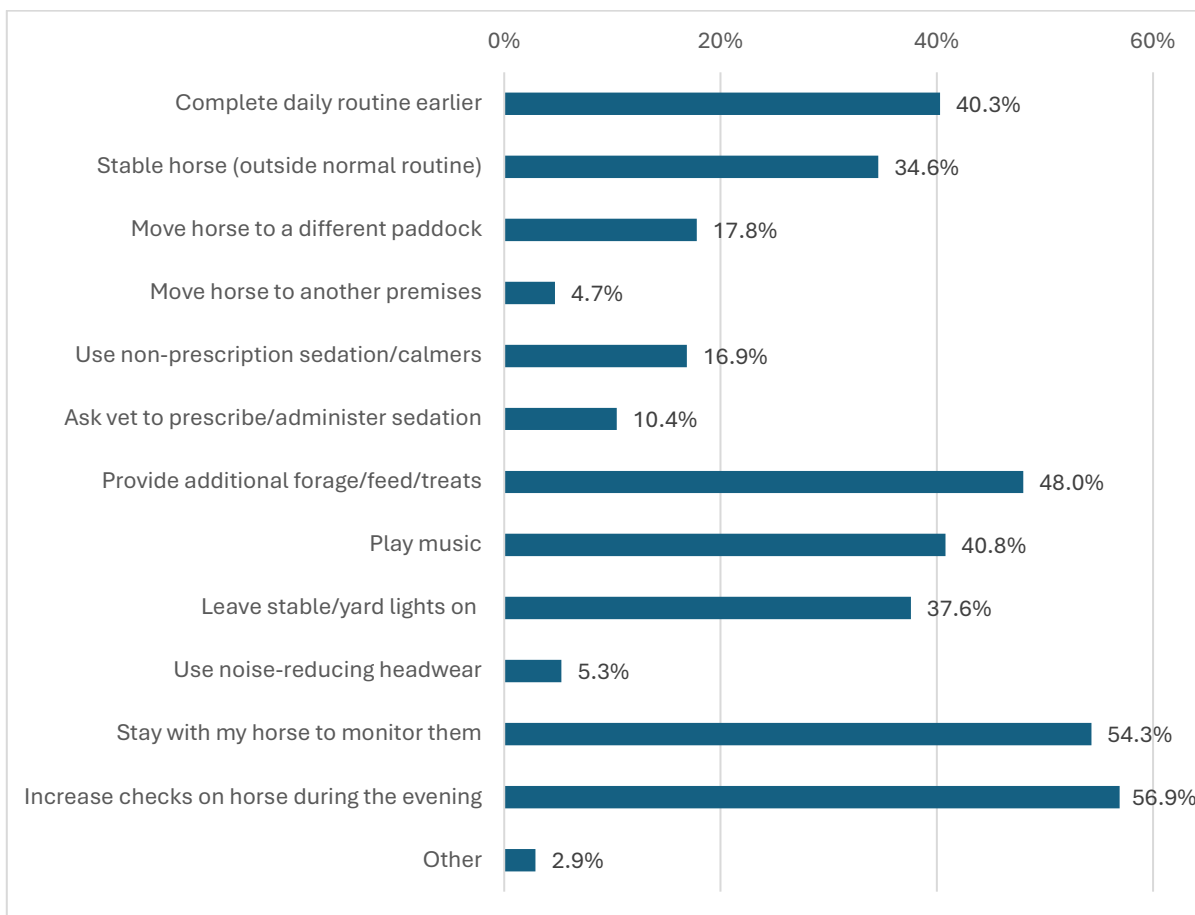


Fig 15. Steps taken to reduce fireworks risk (n=4,000)
 Respondents could select more than one option

“We spend the evening in their field with our horses until we feel it's safe to leave them. Add extra hay, feed etc. Have tried music but can just add another irritant.”

“Take time off work so I can get them sorted earlier”

“Tried stabling and putting loud music on, but one escaped over door, he'd been going around the stable like a wall of death”

“I sedate two and moved one to another yard which cost £500”

“Play fireworks sounds from two weeks prior to event”

“I took my worst affected horse on a road trip in the lorry until the fireworks passed, and my OH stayed with the other who was still terrified but wasn't used to travelling on a lorry”

“Turn out in the paddock furthest away from the fireworks”

“Move electric fences”

“I have 8 horses so do different things as each horse requires”

“You actually can't do much. The horse lives where they live. Moving them can also be dangerous. Mostly you mentally prepare... and just hope and pray your horse copes enough to not kill themselves or others”

How effective do you feel the steps you take are in protecting your horse from fireworks?

More than 85% of respondents felt the steps they took to try and protect their horse from the impact of firework were effective, though only one in ten described them as 'very effective' and almost four in ten thought they were only 'slightly effective'. A further 10% felt the steps they took were not effective at all.

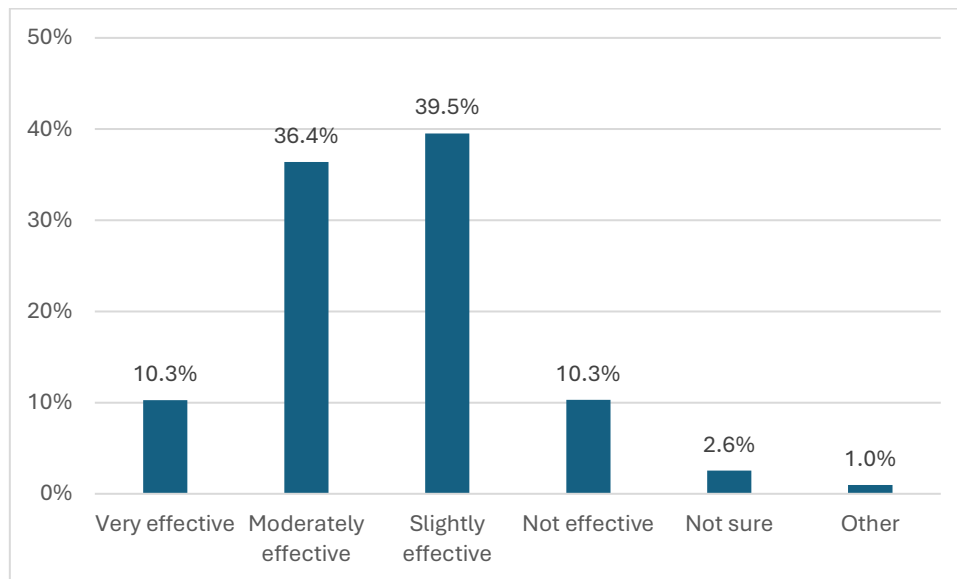


Fig 16. Effectiveness of steps taken to reduce firework risk (3,992)

"I can't take any steps if I don't know when the fireworks will be let off"

"I feel it helps two of my ponies but the other two still get hugely stressed and upset no matter what I do"

"Effective but things have changed and use of fireworks is now not predictable...so you can be caught out"

"My horses were unaffected so pleased the steps we took mitigated the stress/potential for injury"

"Not very effective as fireworks are just too loud and too big"

"It's all I can do. I have tried sending information leaflet drops to no avail, ended up shouting at people to stop and they don't. Calling police or environmental health no use as no legislation available especially"

"Sedation is effective on two of the horses but has no impact on one of them"

"Checks don't change the effect on the horse, just mean injuries can be identified sooner"

"All our horses are used to loud bangs, noises and flashing lights. Owners need to start taking responsibility and working with their horses to prepare them for that "random" firework display"

"There is nothing more I can do for them, if there was, I would"

"Only vet prescribed sedatives help slightly"

"Probably not effective. I think the close monitoring is more to reassure me and other owners on my yard"

"I feel it's unreasonable and unfair to have to physically remove the horses from their home to a quieter place during bonfire week... "

Please indicate the extent to which you agree or disagree with the following statements

Statement 1: 'People should be able to buy and use fireworks freely'

More than 94% disagreed that people should be able to buy and use fireworks freely, with almost three-quarters disagreeing strongly with this statement.

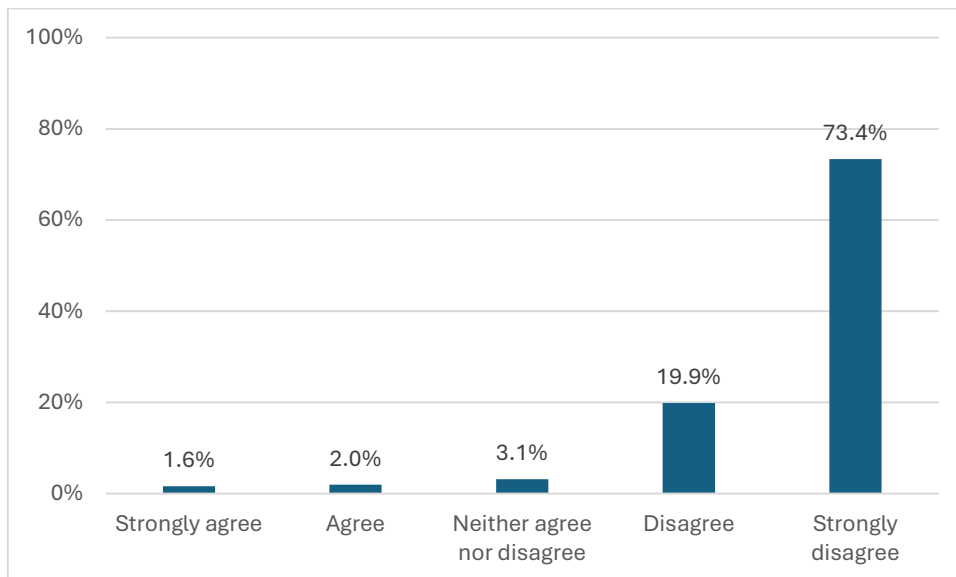


Fig 17. People should be able to buy and use fireworks freely (n=5,128)

Statement 2: 'Owners should do more to protect their horses from fireworks'

Opinions varied more around the question of owners doing more to protect horses from fireworks. Over a third neither agreed nor disagreed with the statement. Just under 40% disagreed that owners should do more, while almost a quarter agreed that they should.

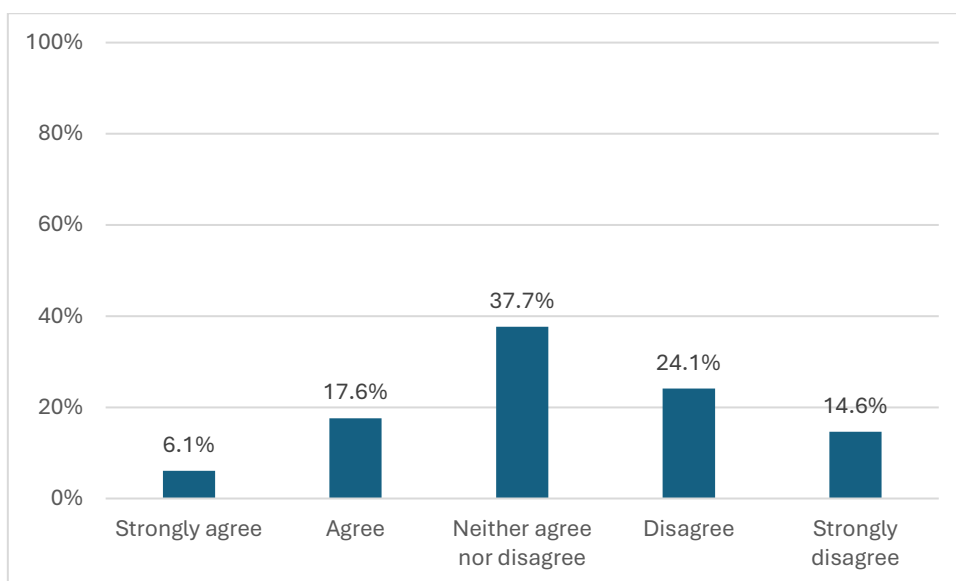


Fig 18. Owners should do more to protect their horses from fireworks (n=5,128)

Statement 3: 'There should be no change to existing fireworks regulations'

Almost 95% of respondents disagreed with not changing existing fireworks regulations, with more than four in five disagreeing strongly. Conversely, 3.4% agreed there should be no change.

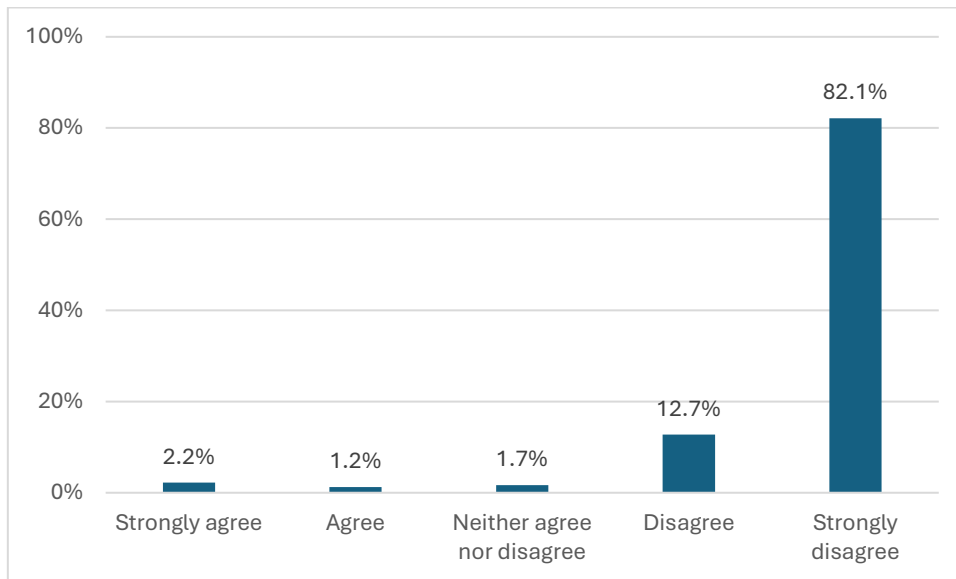


Fig 19. There should be no change to existing fireworks regulations (n=5,128)

Statement 4: 'There should be tighter regulations around use of fireworks'

Consistent with the responses to statement 3, more than 95% of survey respondents agreed there should be tighter fireworks regulations, with almost 90% agreeing strongly. A total of 3.3% disagreed with tighter regulation, with 2.3% disagreeing strongly.

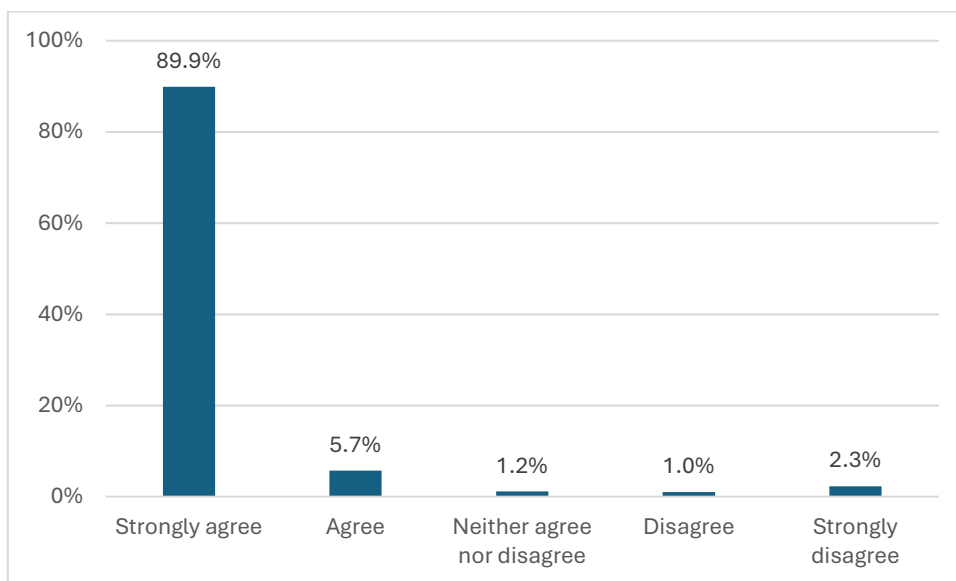


Fig 20. There should be tighter regulations around use of fireworks (n=5,128)

Statement 5: 'There should be looser regulations around the use of fireworks'

A total of 98% disagreed that fireworks regulations should be loosened while 1% agreed with the statement and the remaining 1% neither agreed nor disagreed.

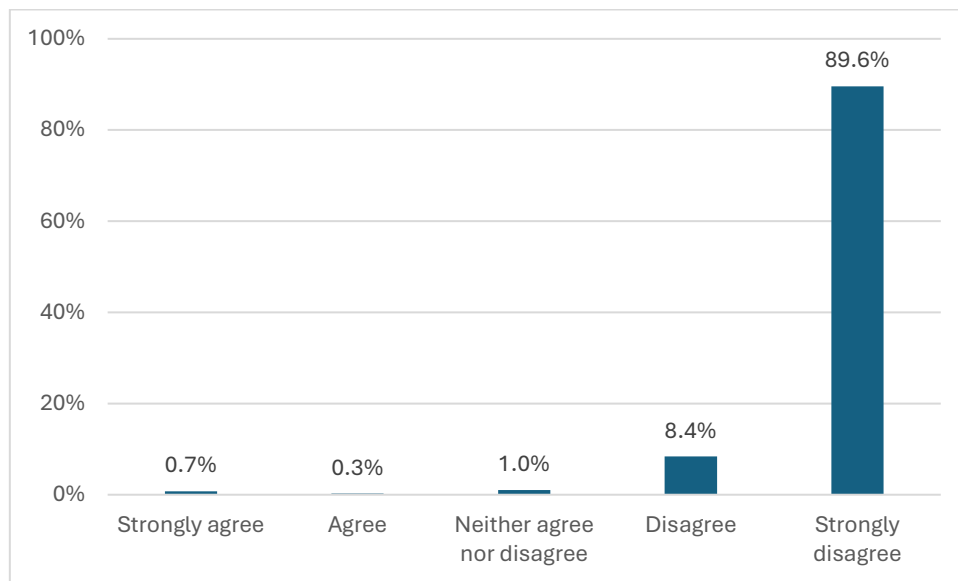


Fig 21. There should be looser regulations around the use of fireworks (n=5,128)

Statement 6: 'Fireworks are an important part of traditional, social and fundraising events'

Fewer people felt strongly on this statement, though more than 60% disagreed that fireworks play an important role. Just under 17% agreed and one in five remained ambivalent.

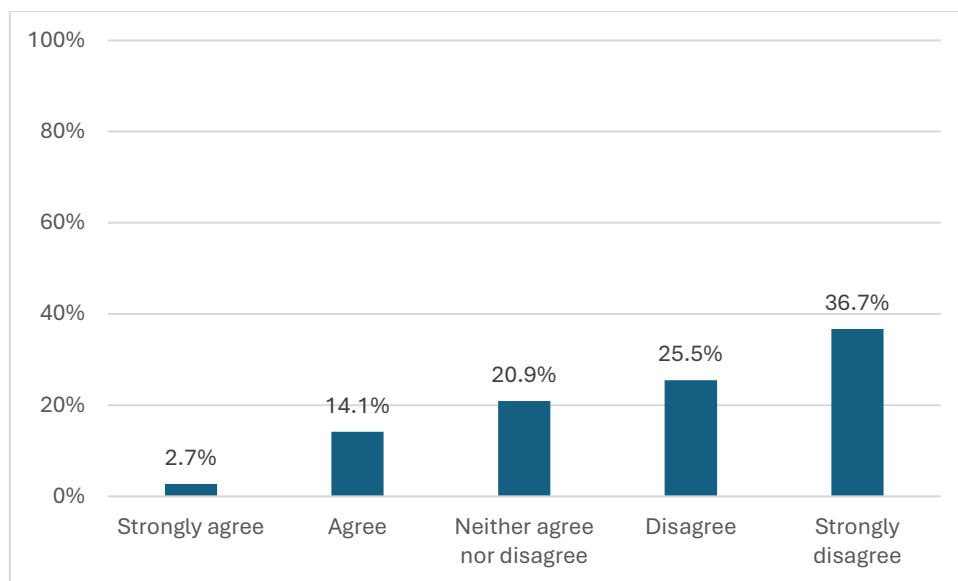


Fig 22. Statement evaluation: Fireworks are an important part of traditional, social and fundraising events (n=5,128)

Statement 7: 'More use of low-noise fireworks/alternatives to fireworks would benefit horse welfare'

More than 90% of respondents felt that increasing the use of low-noise fireworks and alternatives (such as drones and light shows) would benefit horse welfare. Just under 3.5% disagreed.

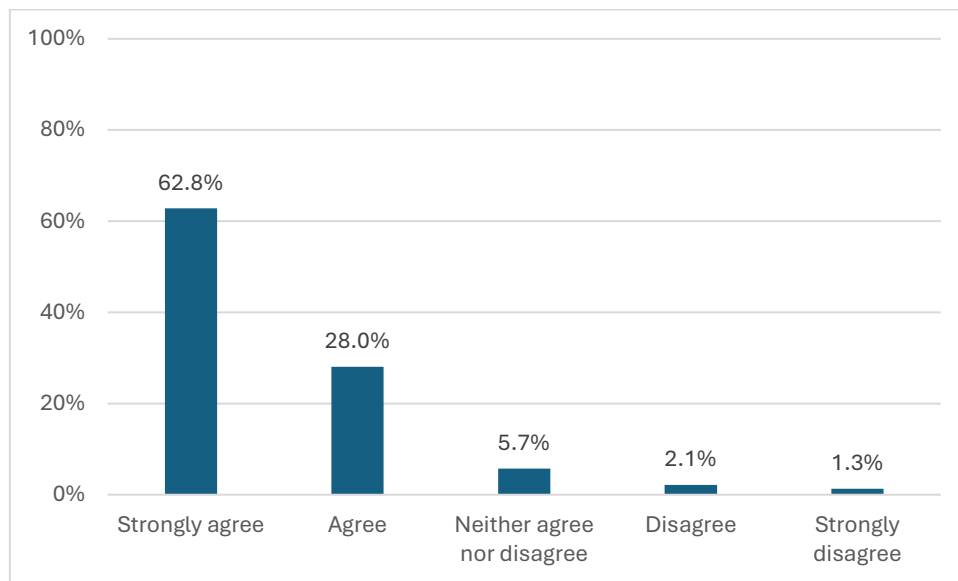


Fig 23. Statement evaluation: More use of low-noise fireworks and alternatives to fireworks would benefit horse welfare (n=5,128)

Statement 8: 'Fireworks can lead to division among neighbours and in local communities'

Just under 85% agreed that fireworks can be a source of division at a local level, with 45% agreeing strongly. However, 3.5% disagreed with this statement while almost 12% neither agreed nor disagreed.

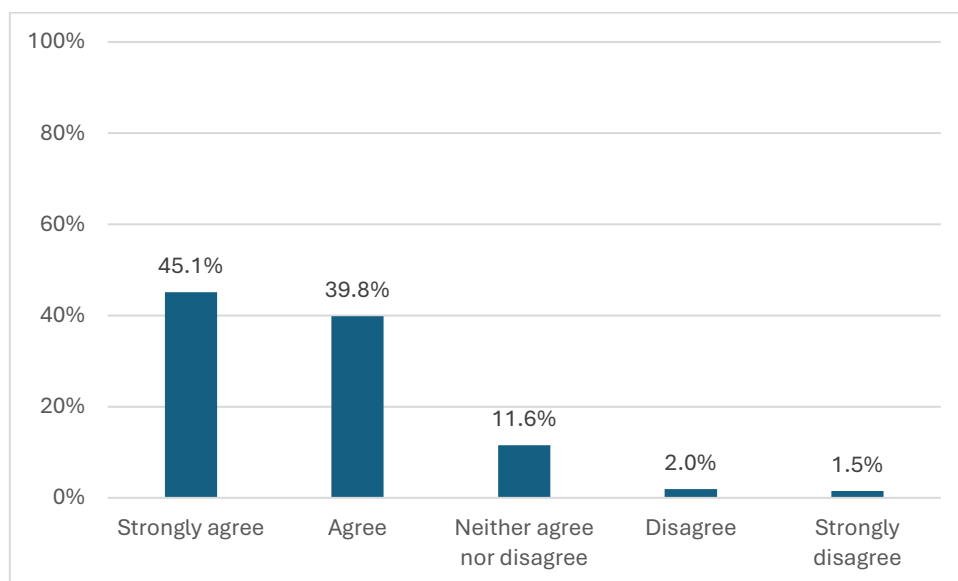


Fig 24. Statement evaluation: Fireworks can lead to division among neighbours/communities (n=5,128)

How would you like fireworks to be regulated in the UK?

Four out of five respondents would like fireworks to be limited to organised, professional displays, while almost three-quarters wanted permitted firework noise levels to be reduced. Half of respondents supported use of fireworks being restricted to traditional dates (Bonfire Night, Diwali, New Year's Eve and Chinese New Year).

One in five respondents said they would prefer all fireworks to be banned. A number of respondents commented that although they would like all fireworks to be banned, they are aware this is unlikely to be achieved.

Almost 300 comments were also submitted under the 'other' option. The most common themes within the open text submission were to not allow fireworks to be let off close to horses/livestock/animals (often requesting a specific distance to be prescribed), for better enforcement of regulations and for mandatory notification of fireworks displays. Other suggestions included not allowing unlicensed retailers to sell fireworks, raising the age limit at which fireworks can be legally bought and introducing a time limit on how long displays can last.

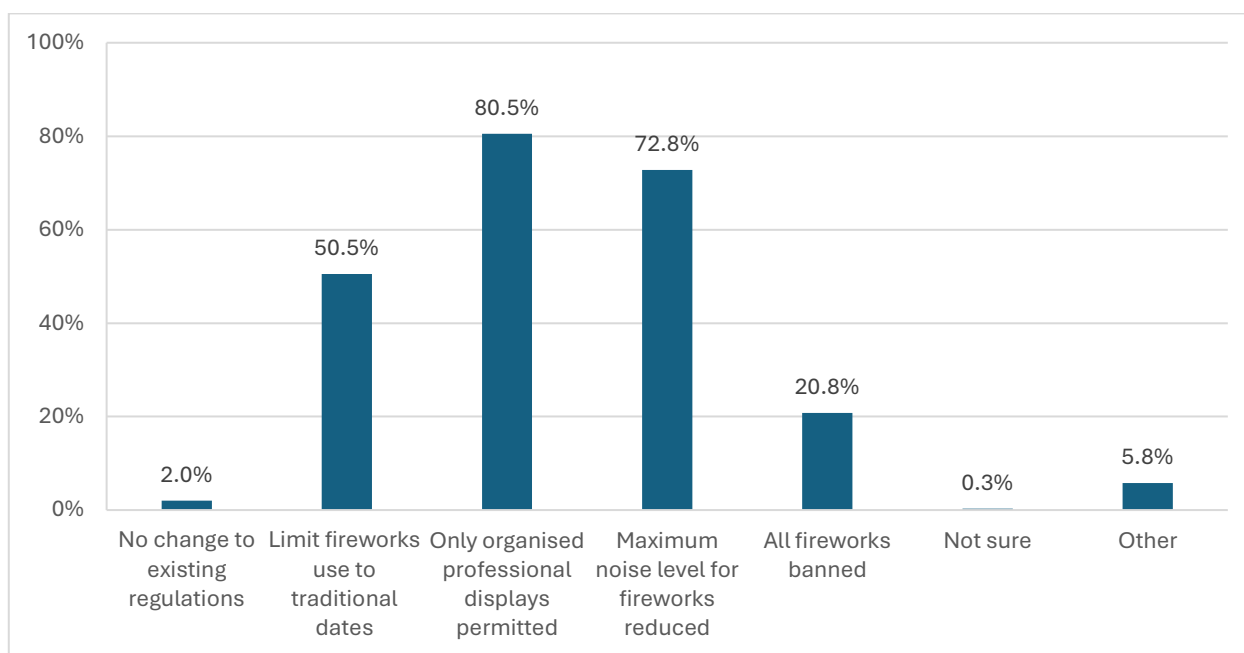


Fig 25. Preferred approaches to firework regulations
(Respondents could select more than one option)

“Organised displays on traditional dates with plenty of notice and not within a certain mileage of livestock”

“Only low impact fireworks on general sale. Others limited to licensed events”

“Feel banning fireworks would prove a backlash. More use of low noise fireworks”

“Better enforcement of the current laws”

“Stop wedding venues in the countryside using fireworks all year round”

“As horse owners we also have to work with the general public and banning them completely isn't the answer to good community relations. We have to meet in the middle”

Conclusions

Despite running for less than five weeks, the survey's positive response rate indicates significant strength and breadth of feeling among horse owners around the issue of fireworks and horses.

As with all self-selecting surveys, respondent bias must be taken into account and owners with a vested interest in fireworks may have been more motivated to respond. It is clear many horse owners have experienced first-hand the impact fireworks can have on equines, with more than two thirds (67.9%) of respondents reporting a horse in their own care having been affected. Concern is also felt beyond those with direct experience, with over 87% saying they worry about the impact of fireworks and almost 75% saying they worry 'a lot'.

It is important to note that not all horse owners see fireworks as an issue and around 3.5% of survey respondents said they don't support calls for tighter regulations. In addition, almost 17% agree that fireworks are an important part of traditional, social and fundraising events, and a quarter feel that owners should do more to protect horses from fireworks.

The data suggests most owners' horses are exposed to fireworks (over 90% of respondents) with private displays being the most common. More than three-quarters of take steps to mitigate the impact of fireworks on their horse, with the point made repeatedly in open text comments that they can only do this if they are aware displays are likely to take place. Of those respondents whose horses had been impacted by fireworks, more than 70% had not been aware that a display was due to take place and less than 6% had been informed directly by the display organiser.

An additional, repeatedly mentioned concern is that fireworks are being used more commonly throughout the year, making it harder to manage their impact. Attention was also drawn throughout the survey to the use of fireworks around traditional dates such as Bonfire Night extending to weeks rather than a few days, meaning preventative steps and monitoring are required for a longer period, often accompanied by anxiety, financial outlay and restricting social and professional choices during this time.

Of those respondents who reported taking steps to protect their horse, only one in ten concluded the steps taken were 'very effective'. Three-quarters felt the steps were 'moderately' or 'slightly' effective and around 10% said the steps were not effective at all. Some of the actions taken were significant, including arranging for a vet to prescribe and administer sedation or moving the horse to another premises.

Of the 3,483 respondents who knew a horse in their care had been impacted by fireworks, around half said the horse was in a stable or building at the time of the incident, with the other half being turned out. Decisions about whether to stable or turn out horses to protect them from fireworks can be difficult for owners as horses have a strong flight instinct that compels them to run when frightened. Of horses turned out while fireworks were let off nearby, over 87% were noted as trotting, cantering or galloping repeatedly as would be expected when their flight instinct is triggered. Inhibiting the urge to flee may reduce the risk of injury or escape but could also increase stress levels and cause dangerous behaviours to escalate when contained. The survey data offer an opportunity to explore the impact of fireworks on stabled and turned-out horses and looking in more detail at this important area will be part of the next phase of analysis.

More respondents reported observing early signs of stress in their horse as fireworks were let off nearby. Appearing very alert, nervous and unsettled was reported by over 90% of owners whose horse was stabled

and more than 85% whose horse was turned out. More than 60% were seen with digestive issues such as loose droppings or diarrhoea, with just under 40% of turned-out horses seen with the same gastric upset. More than half of horses were seen sweating in both environments and around a third attempted to escape, either successfully or otherwise.

When asked to report adverse outcomes believed to be caused by the fireworks display that affected their horse, three quarters of respondents reported at least one significant impact. The most common (over 50%) was for a horse's behaviour to be affected beyond the duration of the fireworks display itself, with comments indicating that it can take several days or even weeks for a horse to become settled again.

Physical injury and illness were a factor for horses in more a third of cases, and veterinary treatment was required by 16.2%. Sadly, the horse died or had to be euthanased in almost 4% of incidents. Comments show that miscarrying foals was also an outcome for some owners, and that there are those who have dealt with the death of horse as a result of fireworks on more than one occasion.

Human health is also at risk when horses are afraid and just over 10% of respondents reported a person being injured due to a horse's behaviour as a result of the horse being distressed by fireworks. Comments also show that in other cases, a person narrowly escaped injury. The data also indicates that there is a risk to humans when horses become loose, with some respondents commenting that their horse found their way onto a road after being spooked by fireworks and escaping.

The number and type of experiences reported by horse owners through the survey mean it is perhaps unsurprising that there was strong support for changes to firework regulations among respondents. More than 95% of all survey respondents agreed with the statement that there should be tighter regulations around fireworks, with almost 90% agreeing strongly. Just over 90% felt that more use of low-noise fireworks and alternatives to fireworks would benefit horse welfare. There was also an indication that people felt change would also benefit social cohesion, as almost 85% agreed or strongly agreed that fireworks can cause division among neighbours and in local communities.

When presented with different approaches to regulation, 2% of respondents wanted no change to existing regulations, while more than 80% would support only organised, professional displays being permitted. In addition, almost three-quarters would like to see the maximum noise level for fireworks reduced, which reflects the fact that noise levels were cited as the aspect of fireworks most likely to impact horses. In addition, over half of respondents wanted fireworks to be limited to traditional calendar dates. One in five respondents would prefer all fireworks to be banned.

While there is limited research on the topic, this report echoes data from other sources. A New Zealand study found that almost 80% of respondents reported their horse to be either 'anxious' or 'very anxious' around fireworks. More than 80% of affected horses used a flight response in reaction and over a quarter sustained subsequent injuries.² A short online survey in 2020 found that over 80% of respondents said their horse was slightly, moderately or severely affected by fireworks and almost 20% had sought veterinary treatment for a horse injured as a result of being scared by fireworks on at least one occasion³.

² Gronqvist, G., Rogers, C., & Gee, E. (2016). The Management of Horses during Fireworks in New Zealand. *Animals*, 6(3), 20. <https://doi.org/10.3390/ani603002>

³ [Fireworks & Horses - A Survey of Owners - AskAnimalweb](#) (accessed 29 Jan 2025)

As many members of the public continue to express concern over the multiple negative impacts of fireworks and show support for calls for tightening of regulations, more data is needed to help inform debate and decision-making on what is often an emotive and under-researched topic. Although this report is focussed solely on equines, and as such is only representing a particular sector that is adversely affected by fireworks, it is hoped that it provides useful insight into the challenges felt and faced by many horse owners in relation to fireworks and will allow their collective experiences to be better understood and taken into account.

Next steps

This report shares initial top-level findings from Redwings' Fireworks and Horses survey in an effort to make the data available to government ministers, MPs, researchers and the public in a timely manner.

The report was shared with the Department for Business and Trade and key findings presented to Minister Justin Madders at an in-person meeting in February 2025.

There is considerable potential for additional analysis on the survey data that will be carried out subsequent to publication of this report, including qualitative analysis on comments submitted as open text responses within the survey, of which there are over 15,000.

This report will be free to download and share through the Redwings website and reports sharing the findings of further analysis will also be shared as they become available.

Further research is needed to help shed more light on the impact of fireworks, both positive and negative, on many sectors of our society and Redwings hoped to continue contributing to this within the limited scope of its charitable resources.

Further information

Please visit www.redwings.org.uk/fireworks or email campaigns@redwings.co.uk.



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Registered charity (Scotland): SCO45070