



8 April 2019

BVA RESPONSE TO PETITIONS COMMITTEE FIREWORKS INQUIRY

INTRODUCTION

- 1) We welcome the opportunity to respond to this inquiry. We recognise that current legislation provides control on the use and sale of fireworks, as well as provisions to minimise noise levels and protect animal welfare.
- 2) However, loud and high-pitched fireworks can have a negative impact on animal health and welfare by causing stress or fear responses across a range of species, including companion animals, wildlife, horses, livestock and zoo animals.
- 3) We therefore consider that current controls on the use and sale of fireworks, as well as controls to mitigate noise levels, do not go far enough to adequately safeguard the health and welfare of animals in the UK.

Does the law provide an appropriate balance between allowing for the safe enjoyment by the public and minimising the risk of fireworks harming people, property or animals?

- 4) Negative impact of noise on animal health and welfare
Studies, reports and animal welfare organisations all agree that loud and high-pitched fireworks can have a negative impact on animal health and welfare by causing not just physical harm, but stress or fear responses across a range of species, including companion animals, wildlife, horses, livestock and zoo animals.^{i,ii,iii,iv, v, vi, vii, viii, ix, x, xi xixxiiiivxv}
- 5) As animals have more acute hearing than humans, many show stress, fear or even phobia

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responses to loud and high-pitched noises. [British Small Animal Veterinary Association \(BSAVA\)](#) highlights that these fear responses may be transient and decrease as the animal gets used to the noise.¹² However, a significant proportion of individuals will become sensitised, in other words the response will increase with repeated exposure.^{xvi} The particular response of an individual animal to noises will vary between individuals. In addition, loud and high-pitched may not only provoke psychological distress, but can also lead to behavioural changes most commonly resulting in an animal attempting to run or hide in response to the use of fireworks potentially causing injury or fatalities for both humans and animals.

- 6) It is estimated that it is estimated that 45% of dogs show signs of fear when they hear fireworks.^{xvii} In addition, the [PDSA 2018 PAW report](#) highlights that 51% of veterinary professionals said that they have seen an increase in pets with phobias such as fireworks in the last two years and 40% of dog owners (3.6 million dogs) report that their dog is afraid of fireworks.
- 7) Further, it is important to highlight the 120 decibel limit on category 3 fireworks is specified to align with the human pain threshold for audible sound. We therefore consider that the legislation does not pay sufficient regard for the impact of noise level and frequency of fireworks on animals, as sentient beings, who are more sensitive to loud and high frequency noise than their human counterparts.
- 8) As outlined at paragraph 7, loud high-pitched noises can result in behavioural changes most commonly resulting in an animal attempting to run or hide in response to the use of fireworks potentially causing injury. In addition, fireworks and bonfires can be potential fire hazards for all species, with a potential negative impact in terms of injury and death.

Examples of species-specific fear or stress reactions to fireworks across species include:

Dogs

- Behaviours such as avoidance (eg. hiding away, not eating and agitation) and overt behaviours (eg. barking, spinning, tail-chewing) that occur as dogs try to drive away the perceived threat
- Dogs exhibiting a strong 'flight response', may injure themselves or others.
- Damage to furnishings and carpets as dogs may try to chew or dig their way out of rooms when shut in to get away from the noise.
- These behaviours can be extremely challenging for owners to address because fireworks remain out of their control and therefore they are unable to remove the triggers for their dog's fearful behaviour.

Cats

- Cats can associate sudden loud noises and flashes of light with danger and an imminent threat to their physical safety, so their natural response is to vacate the

¹ Christensen, J.W.; Rundgren, M.; Olsson, K. Training methods for horses: Habituation to a frightening stimulus. *Equine Vet. J.* 2006, 38, 439–443.

² McGreevy, P.D.; McLean, A.N. Punishment in horse-training and the concept of ethical equitation. *J. Vet. Behav. Clin. Appl. Res.* 2009, 4, 193–197.

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area quickly. However, as cats struggle to locate the source of noise, this often means that they will bolt in an unfavourable direction which may not provide protection

- Cats which have access to outdoor areas are in danger of running into traffic, or becoming lost in an unknown territory. As many cats are not microchipped, this can make it very difficult for them to be returned to their original owners.
- It is recognised that when cats experience chronic stress this often has negative effects over time on their behaviour and physical health such as cystitis, or behavioural problems such as house soiling, redirected aggression to owners and destructive behaviour around the household.

Horses

- Horses are highly unpredictable flight animals and are known to be reactive to loud noises and flashing lights. Horses experience physiological and behavioural changes in response to perceived danger. Sweating, trembling, bucking/rearing, weaving and decreased appetite are commonly described fearful and stress behaviours.
- Horses can exhibit 'flight' responses which can result in horses running away and/or trying to escape their enclosures. The implications of this includes compromised health and welfare for the horse, people and damage to surrounding property and vehicles. Examples include horses escaping onto roads in front of traffic; breaking through their enclosure both stabled or outside, resulting in injuries including lacerations, strains/sprains, broken limbs and potentially life-threatening/fatalities; stress-related conditions including colic and laminitis.
- Injuries can be caused from these panic behaviours and stress related conditions, for example colic, can be caused in some individuals.

Livestock

- Livestock who are startled by the loud noises from fireworks are at risk of injuring themselves on fencing, farm equipment or fixtures and fittings within their housing if startled.
- Debris and remnants of fireworks can be a risk to the health and welfare of livestock if found on the land.
- Poultry are especially at risk of 'smother', where in a fear response birds huddle together, which can result in death for some.

Wildlife

- Loud noises may cause distress or injury to the wildlife depending on proximity to the display and the reach of the noise.
- The smell of fire and burning will cause distress to many wildlife species.
- Debris and remnants of fireworks can also pose can be a risk to the health and welfare of wildlife.

- 9) With this in mind, we consider that fireworks legislation should be revised to reduce the noise limit of fireworks for public use in order to adequately safeguard animal health and welfare. We would support setting the maximum noise levels of fireworks intended for public use and sale to 97 dBAI at 15 metres, in line with the RSPCA's recommendation.

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10 This recommendation is set out in the RSPCA report *Keep the Noise Down: Loud fireworks frighten animals* (2005). The extract taken from the report below sets out the rationale behind the recommendation:

- Most animals, especially pets, are used to and can tolerate common household noises. 97dBAI corresponds to the maximum measured household noise level.
- The 97 dBAI limit will mean that many existing fireworks, including most candles, rockets and fountains, will still be on sale.
- Setting the limit at 97dBAI will encourage manufacturers to design and produce quieter fireworks.

It is important to note that the proposed noise limit of 97dBAI is not based on research regarding the animals' behaviour to maximum noise levels – the RSPCA make clear that it will never subject animals to noise level tests.

11 In addition, we would support the clear labelling of fireworks at point of sale to indicate their noise level to the consumer eg. 'low noise firework' or 'loud firework'. This would enable consumers to exercise an informed choice as to the types of firework they are buying if they wish to minimise the potential negative noise impact of fireworks on animal health and welfare.

12 Restrictions on use and sale of fireworks

We recognise the current controls on the use and sale of fireworks, however, given the potential negative impact on animal health and welfare and the current ease with which people can access and use fireworks, BVA supports further restrictions on use and sale.

13 For example, the private (as opposed to commercial) use of fireworks should be restricted to agreed traditional dates eg. Bonfire Night (5 November), New Year, Chinese New Year, Diwali. This would bring controls on use in line with controls on sale, which requires retailers to have a licence to sell fireworks outside of these traditional dates.

14 We also note that the window for sales of fireworks for vendors without a licence appears disproportionately long around Bonfire Night (5 November), with sales permitted from a retailer without a licence from 5th October to- 10th November. Such a wide window potentially encourages the extended use of fireworks around this period, prolonging the potential for negative impacts on the health and welfare of animals. We would therefore potentially support tighter restrictions on the sale of fireworks around this time however, we recognise that if the selling period is shorter this could place excessive demand on legitimate, licensed vendors and an inability to meet this consumer demand, potentially allowing unscrupulous vendors a place in the market to meet demand.

15 To address the issues as outlined above, a number of solutions could be considered such as shortening the period of both purchase and use in increments and review at defined intervals; in line with one of the existing recommendations in paragraph 22, that the period of use by private users is greater restricted eg. to five days either side of 5 November so allowing for celebrations at a weekend; and reducing the window of time for selling loud fireworks. We also recognise that a reduced period of sale will not necessarily alter human behaviour regarding the use of fireworks therefore a concerted educational campaign as per

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paragraph 27 is likely required underpinned with insights from population behaviourists.

- 16 Further, we note that current regulations specify that it is illegal to set off fireworks in the street or other public places. We would support that this is clarified to indicate that fireworks should not be set off within a certain distance of livestock or wildlife-rich areas.
- 17 In addition, we would support that all public displays and organised events using fireworks require licensing by the relevant authority.

Please see the following section on related management approaches that mitigate the risks to the safety of pets and people posed by fireworks whilst maintaining responsible use and enjoyment.

How effectively are the existing laws enforced by local authorities, trading standards, the police and other authorities?

- 18 Despite the legislative provisions in place to control and act as a deterrent to noise nuisances, we are concerned that Environmental Health Officers will not be able to adequately enforce powers under the Environmental Protection Act 1990 and Anti-Social Behaviour Act 2003 given that the transient nature of fireworks makes it extremely difficult to ascertain the source of the noise nuisance.
- 19 To potentially address this we would suggest consideration is given to a simple on-line registration system which automatically generates a 'certificate' for use by the registrant at the point of purchase. In effect, except for Category F1, very low hazard fireworks³, any individual intending to purchase fireworks for personal use at a private or residential event, registers with the Local Authority within which they intend to use the fireworks. On registration the system could automatically generate a 'certificate' of registration which the registrant could present to the vendor when purchasing fireworks. Name, address including intended date and time of use, could be indicated on the register a month in advance of the date of intended use.
- 20 This could be seen as an initial step in taking action to address concerns raised while at the same time not adopting more onerous measures taken by other parts of the UK such as Northern Ireland⁴, where a licence and payment of a fee is required for use of category 2 (low hazard) fireworks. In Ireland only category 1 (very low hazard) fireworks are legally available to the public whilst a number of European countries also apply their own criteria.⁵⁶
- 21 The intention is that the system should not be onerous for either Local Authorities or users but that it would offer greater protection for pets and people while at the same time encourage awareness and responsible use of fireworks. This would also have the added advantage of Local Authorities knowing when displays are occurring and support targeted and efficient use of resources for enforcement.

How do the roles of public and private firework displays differ?

³ http://www.legislation.gov.uk/ukxi/2015/1553/pdfs/ukxi_20151553_en.pdf

⁴ <https://www.nidirect.gov.uk/publications/application-form-category-f2-garden-fireworks-licence>

⁵ <https://www.nidirect.gov.uk/sites/default/files/publications/Application-form-for-a-Category-F2-%28garden%29-fireworks-licence.pdf>

⁶ https://www.citizensinformation.ie/en/justice/criminal_law/criminal_offences/the_law_on_fireworks.html

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22 We consider that public firework displays present animal owners and authorities enforcing fireworks legislation with more opportunity to mitigate the negative welfare impacts of fireworks for the following reasons:

- Public firework displays can be advertised well in advance, giving animal owners and keepers sufficient time to prepare their pets for firework displays and prevent or manage possible distress.
- Public firework displays are at fixed times of year, meaning, again, that animal owners are able to anticipate their occurrence and take appropriate measures to prevent or manage possible distress in their animals.
- As public firework displays are at specified locations and therefore easier to monitor and ensure that organisers are complying with relevant fireworks legislation
- Public firework display venues are usually public amenity spaces meaning that the risk of displays impacting on livestock and wildlife is minimised.
- Public firework displays attract larger numbers of people, reducing the need for other private displays and therefore the number of fireworks contributing to loud and high-pitched sounds levels.

What evidence do we have about how dangerous or safe different types of firework displays -public and private – are?

23 In terms of animal welfare, there is a range of evidence on how noise and pitch levels can adversely affect animal. This body of work includes, but is not limited to, the references set out below:

- Broucek, Jan. (2014). Effect of Noise on Performance, Stress, and Behaviour of Animals Introduction. 47. 111-123.
- Blackwell, E., Casey, R., & Bradshaw, J. (2005). Firework Fears and Phobias in the Domestic Dog. Scientific Report for the RSPCA, University of Bristol, UK
- Shamoun-Baranes, Judy & Dokter, Adriaan & van Gasteren, Hans & Emiel van Loon, E & Leijnse, Hidde & Bouten, W. (2011). Birds flee en mass from New Year's Eve fireworks. Behavioral ecology : official journal of the International Society for Behavioral Ecology. 22. 1173-1177. 10.1093/beheco/arr102.
- Gronqvist, G., Rogers, C., & Gee, E. (2016). The Management of Horses during Fireworks in New Zealand. *Animals : an open access journal from MDPI*, 6(3), 20. doi:10.3390/ani6030020
- The British Horse Society. Advice on Horse and Fireworks. Available at: https://www.bhs.org.uk/~/_media/bhs/files/pdf-documents/safety-leaflets/horses-and-fireworks.ashx
- Dale, A.R.; Walker, J.K.; Farnworth, M.J.; Morrissey, S.V.; Waran, N.K. A survey of owners' perceptions of fear of fireworks in a sample of dogs and cats in New Zealand. *N. Z. Vet. J.* 2010, 58, 286–291. Available at: <https://www.tandfonline.com/doi/full/10.1080/00480169.2010.69403?scroll=top&needAccess=true>
- Overall, K.L.; Dunham, A.E.; Frank, D. Frequency of nonspecific clinical signs in dogs with separation anxiety, thunderstorm phobia, and noise phobia, alone or in combination. *J. Am. Vet. Med. Assoc.* 2001, 219, 467–473. Available at: https://www.avma.org/News/Journals/Collections/Documents/javma_219_4_467.pdf
- Grandin, T. 2010. Importance of reducing noise when handling livestock. Available at: <http://www.grandin.com/behaviour/principles/noise.html>
- Kelly C. Ballantyne, 2018. Separation, Confinement, or Noises: What Is Scaring That Dog?,

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Veterinary Clinics of North America: Small Animal Practice, Volume 48, Issue 3, Pages 367-386, <https://doi.org/10.1016/j.cvsma.2017.12.005>.

- Linn Mari Storengen, Frode Lingaas, 2015. Noise sensitivity in 17 dog breeds: Prevalence, breed risk and correlation with fear in other situations, Applied Animal Behaviour Science, Volume 171, Pages 152-160, <https://doi.org/10.1016/j.applanim.2015.08.020>.
- Blackwell, E., Casey, R., & Bradshaw, J , 2013. Fear responses to noises in domestic dogs: Prevalence, risk factors and co-occurrence with other fear related behaviour, Applied Animal Behaviour Science, Volume 145, Issues 1–2, 2013, Pages 15-25, <https://doi.org/10.1016/j.applanim.2012.12.004>.
- [World Horse Welfare: Fireworks](#)
- Sulser, C.E. Steck, B.I & Baur, B (2008) Effects of construction noise on behaviour of and exhibit use of Snow leopards *Uncia uncia* at Basel zoo. *International Zoo Yearbook*, 42, pp. 199-205
- Weeks C.A. (2008) A review of welfare in cattle, sheep and pig lairages, with emphasis on stocking rates, ventilation and noise. *Animal Welfare* 17: 275-284
- Weeks, CA., Brown, SN., Warriss, PD., Lane, S., Heasman, L., Benson, T.. (2009) Noise levels in lairages for cattle, sheep and pigs in abattoirs in England and Wales. *Veterinary Record* 165, 308-314.

24 In addition, we note that there are also concerns regarding the use of fireworks and preventable injuries in humans:

- Nizamoglu, M., Frew, Q., Tan, A., Band, H., Band, B., Barnes, D., El-Muttardi, N., ... Dziwulski, P. (2018). The ten-year experience of firework injuries treated at a UK regional burns & plastic surgery unit. *Annals of burns and fire disasters*, 31(1), 13-16. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6116645/>

Should there be specific rules to protect animals?

25 As outlined throughout this response, BVA supports further restrictions on the use and sale of fireworks to safeguard animal health and welfare. Such restrictions should include:

- A reduction in the noise limit of fireworks for public use in order to adequately safeguard animal health and welfare. We would support setting the maximum noise levels of fireworks intended for public use and sale to 97 dBAI at 15 metres, in line with the RSPCA's recommendation.
- Clear labelling of fireworks at point of sale to indicate their noise level to the consumer eg. 'low noise firework' or 'loud firework'.
- The restriction of private use of fireworks to agreed traditional dates eg. Bonfire Night (5 November), New Year, Chinese New Year, Diwali. This would bring controls on use in line with controls on sale, which requires retailers to have a licence to sell fireworks outside of these traditional dates.
- We would therefore support tighter restrictions on the sale of fireworks around Bonfire Night, similar to those for other traditional dates set out in fireworks legislation.
- Licensing of all public displays and organised events using fireworks by the relevant authority.
- Specific penalties where fireworks are used to cause harm to working horses or dogs when in public service or where employed to provide assistance to individuals with disabilities or medical conditions.

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- In addition, we would suggest setting up an on-line registration system for private or residential users of fireworks who intend to hold a private event involving fireworks, other than Category 1, very low hazard fireworks (see paragraph 18 above).

Are the public and event organisers sufficiently aware of the necessary safety precautions when using fireworks?

- 26** We consider that the government should improve public and event organiser awareness of the potential negative impact of fireworks on animal health and welfare by disseminating messaging through its communications channels, particularly around the traditional dates when fireworks are used eg. Bonfire Night (5 November), New Year, Chinese New Year, Diwali. This could be paired with a cross-stakeholder, collaborative approach with veterinary associations and animal welfare organisations, who continue to issue timely advice to animal owners on how to prepare their pets for firework displays and prevent or manage possible distress.
- 27** We would encourage owners and animal keepers who are concerned about potential fear or stress responses in their animals to consult with their veterinary surgeon, if possible well in advance of firework displays. Veterinary surgeons will be able to advise on evidence-based therapies for fear or stress responses or refer to an animal behaviourist⁷⁸⁹¹⁰¹¹ to improve the welfare of the animals under their care.
- 28** In addition, Government guidance on the responsible use of fireworks should highlight the potential negative impact of fireworks on animal health and welfare as a key area for event organisers to consider in their planning of displays eg. in the Department for Communities and Local Government document [Celebrating with bonfires and fireworks: a community guide to organising bonfires and fireworks](#).
- 29** Similarly, if the Government were to require that all public displays and commercial organised events using fireworks should be licensed by the relevant authority, it would be able to stipulate that as part of licensing conditions the license holder must pay due regard to how their firework display may impact on companion animals, wildlife, horses and livestock (eg. distance from livestock and wildlife rich sites, measures to ensure there is no left-over debris) in the local area and give local residents advance notice of the planned display.
- 30** Public facing communication materials covering standard pragmatic messages would likely be valuable in addressing some of the issues and educating the public. This would need to involve all stakeholders including manufacturers, both on-line and high street retailers, end-users whether public or private eg residential and relevant stakeholder organisations. Including standard information on all firework packs, sales websites and requiring a leaflet to

⁷ <http://www.bvba.org.uk/>

⁸ <https://capbt.org/>

⁹ <https://www.apbc.org.uk/>

¹⁰ <http://www.abtcouncil.org.uk/>

¹¹ <https://www.rspca.org.uk/adviceandwelfare/pets/general/findabehaviourist>

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be issued with all purchases would support educating end users. Key points in communications could include the impact of different fireworks on both human and animals and the penalties for mis-use. Availing of the opportunities around the four key public events by means of targeted campaigns would increase awareness and support education of the public. Re-iterating and re-visiting previous government communications toolkit advice¹² may be of value and minimise unnecessary use of resource in preparing similar.

- 31 There perhaps also needs to be some information on the injuries to both humans and animals when fireworks are not used responsibly. Sales of fireworks to underage individuals may also need to be assessed depending on any available statistics.

Conclusion

- 32 Whilst we recognise that current legislation provides controls for the use and sale of fireworks, as well as controls to mitigate the impact of loud noises, BVA would support further restrictions on the use and sale of fireworks to safeguard animal health and welfare.
- 33 Loud and high-pitched fireworks can have a negative impact on animal health and welfare by causing stress or fear responses across a range of species, including companion animals, wildlife, horses and livestock. We therefore consider that current controls on the use and sale of fireworks, as well as controls to mitigate noise levels, do not go far enough to adequately safeguard the health and welfare of animals in the UK.
- 34 We would welcome opportunities to work collaboratively with the relevant authorities and government departments to raise awareness of the potential negative animal health and welfare impacts of firework displays, both in terms of increasing public and event organiser awareness and helping pet owners and animal keepers prepare their animals to prevent or manage distress during firework displays.

ⁱ Broucek, Jan. (2014). Effect of Noise on Performance, Stress, and Behaviour of Animals Introduction. 47. 111-123.

ⁱⁱ Blackwell, E., Casey, R., & Bradshaw, J. (2005). Firework Fears and Phobias in the Domestic Dog. Scientific Report for the RSPCA, University of Bristol, UK

ⁱⁱⁱ Shamoun-Baranes, Judy & Dokter, Adriaan & van Gasteren, Hans & Emiel van Loon, E & Leijnse, Hidde & Bouten, W. (2011). Birds flee en mass from New Year's Eve fireworks. Behavioral ecology : official journal of the International Society for Behavioral Ecology. 22. 1173-1177. 10.1093/beheco/arr102.

^{iv} Gronqvist, G., Rogers, C., & Gee, E. (2016). The Management of Horses during Fireworks in New Zealand. *Animals : an open access journal from MDPI*, 6(3), 20. doi:10.3390/ani6030020

^v The British Horse Society. Advice on Horse and Fireworks. Available at:

<https://www.bhs.org.uk/~media/bhs/files/pdf-documents/safety-leaflets/horses-and-fireworks.ashx>

^{vi} Dale, A.R.; Walker, J.K.; Farnworth, M.J.; Morrissey, S.V.; Waran, N.K. A survey of owners' perceptions of fear of fireworks in a sample of dogs and cats in New Zealand. *N. Z. Vet. J.* 2010, 58, 286–291. Available at: <https://www.tandfonline.com/doi/full/10.1080/00480169.2010.69403?scroll=top&needAccess=true>

^{vii} 4. Overall, K.L.; Dunham, A.E.; Frank, D. Frequency of nonspecific clinical signs in dogs with separation anxiety, thunderstorm phobia, and noise phobia, alone or in combination. *J. Am. Vet. Med. Assoc.* 2001, 219, 467–473. Available at:

https://www.avma.org/News/Journals/Collections/Documents/javma_219_4_467.pdf

¹² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/31865/10-1038-fireworks-safety-media-toolkit.pdf

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viii Grandin, T. 2010. Importance of reducing noise when handling livestock. Available at:
<http://www.grandin.com/behaviour/principles/noise.html>

ix Kelly C. Ballantyne, 2018. Separation, Confinement, or Noises: What Is Scaring That Dog?, *Veterinary Clinics of North America: Small Animal Practice*, Volume 48, Issue 3, Pages 367-386,
<https://doi.org/10.1016/j.cvsm.2017.12.005>.

x Linn Mari Storengen, Frode Lingaas, 2015. Noise sensitivity in 17 dog breeds: Prevalence, breed risk and correlation with fear in other situations, *Applied Animal Behaviour Science*, Volume 171, Pages 152-160,
<https://doi.org/10.1016/j.applanim.2015.08.020>.

xi Blackwell, E., Casey, R., & Bradshaw, J, 2013. Fear responses to noises in domestic dogs: Prevalence, risk factors and co-occurrence with other fear related behaviour, *Applied Animal Behaviour Science*, Volume 145, Issues 1–2, 2013, Pages 15-25, <https://doi.org/10.1016/j.applanim.2012.12.004>.

xiii Sulser, C.E. Steck, B.I & Baur, B (2008) Effects of construction noise on behaviour of and exhibit use of Snow leopards *Uncia uncia* at Basel zoo. *International Zoo Yearbook*, 42, pp. 199-205

xiv Weeks C.A. (2008) A review of welfare in cattle, sheep and pig lairages, with emphasis on stocking rates, ventilation and noise. *Animal Welfare* 17: 275-284

xv Weeks, CA., Brown, SN., Warriss, PD., Lane, S., Heasman, L., Benson, T.. (2009) Noise levels in lairages for cattle, sheep and pigs in abattoirs in England and Wales. *Veterinary Record* 165, 308-314.

xvi <https://www.bsava.com/Resources/Veterinary-resources/Position-statements/Fireworks>

xvii Blackwell, E., Casey, R., & Bradshaw, J. (2005). Firework Fears and Phobias in the Domestic Dog. Scientific Report for the RSPCA, University of Bristol, UK