From: Daniel Mailer

Sent: Monday, October 26, 2020 10:38 AM

To: Bunn, Jerri-Joanne

Subject: [EXTERNAL] FW: request for delegation status for November 3rd meeting by Dan Mailer

Hi Jerri

Once again, here are my materials with my now revised request for standing to speak at a future CAPS committee meeting which I understand is scheduled for December 1, 2020.

I do not plan to attend on Nov 3rd but will await the decision of the committee re request for standing for Dec 1st

Thanks very much

Daniel R. Mailer

Presentation in Support of Amending The City of London Noise/Sound Bylaw to prohibit the use of outdoor high frequency sound emitting devices within City limits

Background Facts

1. Sound frequency is measured in Hertz (hz).
2. The human ear can hear sounds in the frequency range of 20 hz to 20,000 hz. The ability to hear high frequency sounds declines as we age. Human speech is typically in the frequency range of 250 to 8,000 hz.
3. Home Depot, Lowe's and Amazon and other retailers are now selling "pest repellant" devices for outdoor use (to repel cats, dogs, skunks, birds etc.). These devices typically emit high frequency sounds in the range of 13, 500 hz to as high as 25,000 hz at a loud decibel level (as high as 110 decibels) with a minimum distance range of 70 feet from the device to 70 feet side by side.
4. A device that emits a sound at 110 decibels is considered "unhealthy", "very loud" and "dangerous" for human exposure over 30 minutes. 110 decibels is the equivalent of a loud car horn or a rock concert. 120 decibels is equivalent to an intruder alarm or jet plane taking off.
5. Sounds of less than 75 db even after lengthy exposure are unlikely to cause hearing loss, however, extended or repeated exposure to sounds above 85 db can cause hearing loss.
6. Loud sounds in the high frequency range, even those that the human ear cannot "detect", can cause damage to the human ear.
7. Studies have shown that loud high frequency sounds that can and cannot be heard can cause health issues including everything from anxiety, nausea, headaches and hearing loss.
8. It is also worth noting, that devices generating a fundamental high frequency sound often also generate harmonic frequencies called subharmonics, at ½ the frequency of the fundamental high frequency sound (for example: a device generating a frequency at 16,000 HZ can also generate a harmonic frequency of 8,000 HZ well within the normal hearing range. As another example a high frequency sound can also resonate with a window creating a subharmonic sound audible by the human ear.)

Examination of a Typical High Frequency Sound (Ultrasound) Emitting Device- The Aspectek "Yard Sentinel™ - Strobe"

9. The Aspectek Yard Sentinel™ is a typical pest repelling device for outdoor use. It is just one of many similar devices on the market today. It retails for approximately $40.00. The purpose of referring to this particular device is not to center it out but to simply illustrate how many of these devices function.

Audible Sound

10. The Aspectek device is capable of emitting an audible sound similar to a shrieking eagle. The volume level of this sound can be controlled or turned off and can be set to continuous sound or triggered by a motion senor. The same applies for the strobe light on the unit.

High frequency (ultrasonic) Sound

11. According to the operating manual, of the Aspectek device it also emits a high frequency (ultrasonic) sound in the range of 15,000 hz to 25,000 hz (frequency range adjustable).
12. The operating manual for the device indicates that whenever this device is plugged in and turned on, the device continually emits a "high pressure" ultrasonic signal that according to the manual is only slightly audible to humans(see page 20 of the manual).
13. There is a warning printed on the back of the device relating to the high frequency adjustment knob which reads: "Caution - These sounds may disturb people" (see diagram in manual on page 18)
14. When questioned by email, a representative of the distributor of the device admitted that young children or young adults may be able to hear the high frequency sound (and thereby be disturbed by it when the device is on). See email of October 13, 2020 from service at Aspecktek to Daniel Mailer .

General Thoughts - Health Hazards

15. It is submitted that ultrasound emitting devices pose potential annoyance, disturbance and health hazards for people, especially young people and young adults. There is the potential that this device could cause health difficulties for every age group including those who cannot hear the high frequency sounds but still receive the high pressure sound in their ears. If these devices are as loud as 110db of continuous sound, they could potentially damage hearing.
16. These devices represent unnecessary noise pollution in our neighbourhoods and with respect, their use should be banned inside the City limits.
17. Arguably the ultrasound from these types of devices represent a sound that could be considered cruel treatment of animals, pets and wildlife.

18. Finally, one must be mindful of the possibility of use of these devices for nefarious purposes. They say that fences make good neighbours but these devices could be used by operators to harass and intimidate neighbours and their pets beyond property boundaries.

Request

I am asking the City of London to amend the Noise/Sound bylaw to prohibit the outdoor use of pest deterrent high frequency sound emitting devices within City limits since exposure to these kinds of noise/sounds pollute our sound environment, can be and are annoying, disturbing, damaging and likely pose a genuine health risk to the general public.

Submission

It is submitted that there is no place for these types of devices in the residential setting and the City of London would do a disservice to its citizens to continue to allow their use. As well these devices are arguably cruel treatment of animals and wildlife. There is also a growing concern in science regarding the adverse health consequences of exposure to ultrasound to humans, and although the science is new and developing and not yet settled, the City should err on the side of caution and ban these devices.

In the alternative, it is suggested that City Bylaw Officers be instructed to order the discontinued use of these devices whenever a complaint is received from the public about the use of a particular device. The onus should not be on those complaining but rather on those using and possibly abusing the devices.

Submitted by: Daniel R. Mailer
Lawyer (1983 - LLB University of Ottawa)
Electronic Technician (1976-Fanshawe College)

Attachments:

- email from Aspectek to Daniel Mailer of October 13, 2020;
- Aspectek product manual for Yard Sentinel™ Strobe dated June 2014;

Further References:

- Article published in UK Daily Mail - “Ultrasound in public places could be triggering sickness, headaches and pain.” ; (available online) and
- see 2nd article from The Journal of the Acoustical Society of America, Vol 144 No #4; “Effects of very high frequency sounds and ultrasound on humans.”(available online)

Daniel Mailer

From: Daniel Mailer [redacted]
Sent: October-13-20 6:05 PM
To: Daniel Mailer
Subject: Fwd: Question re high frequency sound from Yard Sentinel Strobe

Begin forwarded message:

From: Aspectek.com <service@aspectek.com>
Subject: Re: Question re high frequency sound from Yard Sentinel Strobe
Date: October 13, 2020 at 4:07:47 PM EDT
To: Daniel Mailer <[redacted]>

Hello Daniel,

Thank you for contacting us.
Small kids or younger adults may hear the ultrasonic alarm when the frequency is set to low (counterclockwise). Please adjust the frequency dial in this case.
Overall this product is safe to use near people.

If you have any other questions, feel free to let me know.

Best regards
Customer Service
Aspectek

How would you rate my reply?
Great Okay Not Good

On Mon, Oct 12, 2020 at 7:36:53 PDT, Daniel Mailer [redacted] wrote:
Hello

I have a question about the Yard Sentinel Strobe.
The manual indicates that humans can't hear the ultrasonic high frequency sound but on the back of the unit it indicates "caution, these sounds may disturb people".

Can you please clarify this as I don't want to cause a problem with my neighbours. Thanks

Dan