

Gunnersbury Park Music Events & Noise



The problem is well known...its not just us...

Music festival noise levels anger local residents



GETTY IMAGES
Brockwell Park hosted six days of festivals across the past two weeks

At a glance

- Residents near a south London park are annoyed at recent music festival noise levels
- Brockwell Park has hosted a range of music festivals in the past two weeks
- Lambeth Council issued an apology to those affected

Organiser Brockwell Live said the sound levels had been agreed with Lambeth Council and were "built into our licence".

Lambeth Council apologised to residents but added the noise conditions for this year had been exactly the same as last year, and noise generated was "fully compliant" with "license conditions".

Strict new limits have been imposed on any music festivals that will be held in [Newcastle's Exhibition Park](#), after an outcry from neighbours about last year's This Is Tomorrow concerts.

More than 90 complaints were lodged about the "horrendous" disturbance caused by the four-day festival last September to neighbours in [Jesmond](#), with city council chiefs admitting that the event "did not go well". But organisers will now have to comply with a set of stringent rules designed to avoid a repeat of those problems – including heavier restrictions on noise levels.

Councillors on the committee also backed a crucial restriction on noise from music festivals, limiting it to no more than five decibels above existing background levels at the nearest homes. Urban Green had wanted that limit to be 10 decibels above and its solicitor, Duncan Craig, claimed

News

Noise from Download Festival 2023 rattles windows 15 miles away from Donington Park

Download Festival rattles windows 15 miles away from Donington Park leaving residents fuming

customer's attitude towards what they're expecting from the sound quality. Looking at electronic music festivals in rural areas and the demographic that goes to them, if they're not being rattled by bass then it's not a good sound system.'

The problem is well known...its not just us...

The battle of the bass

Punters might love the shudder of bass rumbling through their torsos, but not everyone is down for the party. On the flip side, bass-heavy music impacts local residents considerably more than other genres due to the low frequency being able to travel further distances, making it more of a concern for councils. 'Bands will probably be playing at a higher frequency which won't travel as far,' says Tooth. 'That's why, if you're in your bedroom at night, you can hear the pump in that bass but you might not hear the guitars on top of that.' Physics, huh?

'As a resident, you might think that festivals are getting louder, because the music is more repetitive or uses sound systems made to be better at reproducing those low frequencies,' Miller says. 'It's also probably to do with the number of events taking place in a single location, which can have a cumulative effect.'

Take Finsbury Park, north [London](#), for example, where a major gig or music festival is taking place for four weekends out of nine in July and August this year. 'Locals face a loss of public access to a much needed green space for months of the year, mostly over the warmest months,' says Bethany Anderson, co-chair of The Friends of Finsbury Park campaign group.

'And then there's noise pollution. Vibrations have a huge impact on the mental health of residents, especially those in flats nearest to the park. Even small events have loud sound systems. The noise has reportedly been heard from up to a mile away. Those most affected are the flats on Seven Sisters which reportedly shake from the vibrations.'

[Are Music Festivals Really Getting Quieter? We Asked the Experts \(timeout.com\)](#)

Are music festivals really getting quieter? We asked the experts

Large-scale outdoor shows don't seem to be hitting the same. So what's going on?



Written by [Chiara Wilkinson](#) Thursday 25 May 2023



I went to a handful of festivals last summer, across all sorts of genres: jazz, techno, indie, pop, drum and bass. I two-stepped for hours on end and quite literally lost my voice. But a theme started to emerge when I asked friends if they enjoyed themselves.

'Yeah, but the sound wasn't the best,' said one seasoned raver. 'I couldn't hear it properly,' added another. 'There was no bass coming through during Bradley Zero's set,' one more noted.

Something in the air

But no matter how much planning you do, some things can just be completely out of the organiser's control – like the weather. 'Last year, we had unprecedented temperatures: 40C heat and everything else,' says Gregory. 'Unfortunately, that created what we call a sound bomb. Because there was no wind or cloud, the sound was literally just exploding and bouncing everywhere instead of the sound being directed. It was the first time in 23 years we ever had that.'

My Experience 1.78km away



Rattling Windows

*Booming inside as bass
collects*

Continuous - no respite

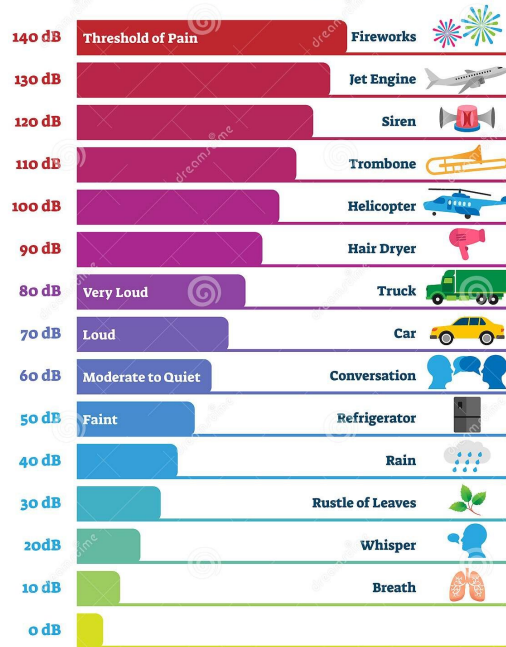
*Heat - hottest days really
wanted windows open*

*Stressful time - I really needed
that weekend to recover*

21 August 2022 - 9.33pm @ 1.78km distance



DECIBEL SCALE



dreamstime.com

ID 173114173 © VectorMine

Decibels are measured on a logarithmic scale, meaning that a increase/decrease of 10 decibels is necessary to double/halve the perceived loudness of a sound. A change of 3 decibels (db) represents a doubling or halving of the sound's power or intensity

21 August 2022 - 9.33pm



About the Bass...

Humans perceive different frequencies of sound with varying sensitivity. This concept is encapsulated by the Fletcher-Munson curves (also known as equal-loudness contours), which demonstrate that our ears are most sensitive to frequencies between 2,000 and 5,000 Hz, and less sensitive to extremely high or low frequencies.

Because of this, to make bass frequencies more perceptible and impactful in the mix, especially in music genres that favor a strong bass presence like EDM, hip-hop, and rock, **sound engineers often have to increase the volume or power of the bass relative to other frequencies.**

While this makes the music more enjoyable for attendees, it also increases the distance the bass sounds travel, which in turn leads to increased noise pollution. This effect is exacerbated by the physical properties of low-frequency sound waves: **bass frequencies can travel farther and penetrate structures more easily than higher frequencies and they can cause nearby structures to resonate**, leading to the 'booming' effect experienced by those living near the event.

Lower-frequency sounds have longer wavelengths, allowing them to diffract or bend around objects more effectively. This is why the "booming" bass can be heard far away from the source and even inside houses or flats where higher frequencies might be dampened.

Bass sounds are not just heard, but can also be physically felt as vibrations in the body. This creates a multisensory experience.

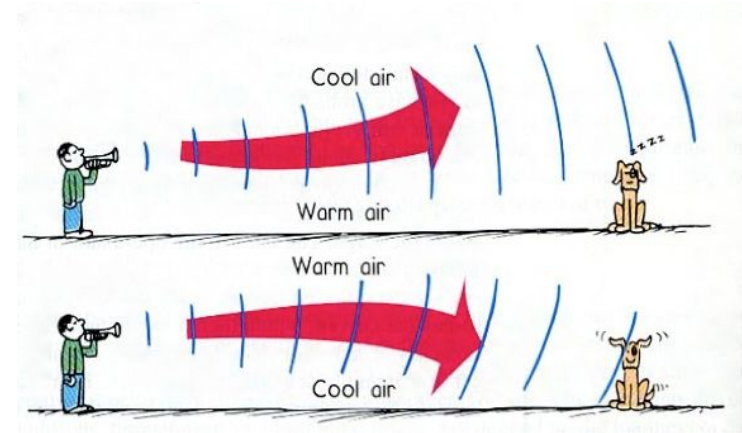
Bass notes often lay the rhythmic foundation of a piece of music. This can make music easier to dance or move to, and can also make it difficult to ignore and difficult to mask.

The physical vibrations that make bass appealing in a concert can be unsettling or uncomfortable in your home, especially if they're unexpected or unwanted. This can create a feeling of invasion or violation, as if the music is intruding into your personal space.

Music doesn't just sound louder at night...

At night, several factors can make the bass sound even more pronounced:

1. **Ambient Noise Reduction:** During the day, ambient noise from traffic, people, and other environmental sounds can partially mask the sound of the bass. At night, when these sounds decrease, the relative loudness of the bass increases.
2. **Acoustic and Atmospheric Properties:** Sound can be influenced by temperature, humidity, and wind direction. At night, particularly after sunset, the temperature gradient near the ground can cause a phenomenon known as temperature inversion. This can lead to an increase in the distance that sound travels, making it sound louder at greater distances.
3. **Psychological Factors:** At night, people are generally trying to relax or sleep, so they may be more sensitive to noise intrusion. The contrast between the quiet environment and the sudden loud music can make the sound seem more intrusive and annoying.
4. **Structural Resonance:** Certain low-frequency sounds can cause materials like glass or plaster to vibrate, amplifying the sound within structures. This phenomenon can make it seem as though the bass is louder inside a home than it is outside.



*There is a phenomenon called refraction that affects the direction of sound propagation. During the day, the sound bends away from the ground; during the night, it bends towards the ground. Hence at night you have additional "sound" reaching you, making it louder. **This is not a perceived effect because there is less other noise around - the sound IS actually louder.***

When considering loudness, events that can affect residential areas at night need to factor in the perceived loudness and actual sound-level changes - otherwise the effect for residents is "it got louder and louder right up until the end"

The job of the sound engineers & structuring a set...

“...it got louder and louder right up until the end”

1. Music sets are structured with 'peaks' or climaxes, often linked to volume increases.
2. Sound engineers and organisers might push the volume boundaries for enhanced event experiences, resulting in louder peaks and untested sound leakage.
3. When volume limits are breached, blame can be passed from management to producers, and then to on-site engineers.
4. For certain music genres, organisers often boost the bass sounds, creating a physical 'feel' that attendees enjoy. This requires bass to be at higher volumes, causing more sound leakage, especially because bass sounds need to be louder to be perceived equally to higher frequencies.



From the psychological perspective of a resident then, hoping to get some peace on a Sunday night before a stressful week at work - their frustration and distress is likely to only increase up to the very end of the event

Do residents really matter? Is it really that distressing?

1. The late end times and continuous nature of these events pose a burden on residents, especially during school nights. The feasibility of earlier finishes and effective noise mitigation needs to be examined to lessen the impact on residents' peace.
2. Cumulative noise pollution from various sources, like roadworks, further erodes residents' ability to enjoy their homes. These events shouldn't be viewed in isolation but as additional noise sources in an already noisy environment. Continuous exposure, especially in summer, can negatively impact mental and physical health. It's disappointing that suggestions to alter event times or frequency for residents' relief don't seem to have been considered.
3. The World Health Organization (WHO) considers noise pollution as an underestimated threat that can cause a number of short- and long-term health problems such as stress, sleep disturbances, heart diseases, reduced cognitive performance, and impaired hearing. People have the right to the peaceful enjoyment of their homes. Continuous exposure to noise, especially during summer months when windows are open, can indeed be detrimental to the quality of life and may infringe on rights. The effects on residents' mental and physical health should not be underestimated.



From the psychological perspective of a resident then, hoping to get some peace on a Sunday night before a stressful week at work - their frustration and distress is likely to only increase up to the very end of the event

Does a 2dB reduction help?

While it's commendable that action is being taken to address residents' concerns, a reduction of 2 decibels may not have a significant impact on the perceived loudness of the noise. Decibels are measured on a logarithmic scale, meaning that **a decrease of 10 decibels is necessary to halve the perceived loudness of a sound.**

Moreover, the decibel scale is also frequency-dependent. Lowering the overall sound level might not reduce the bass sound that is my greatest concern, given the reasons we've discussed about how low-frequency sounds travel and are perceived.

Also, the fact that this reduction is voluntary could lead to inconsistent levels of noise from one event to another, depending on whether or not individual organizers choose to comply. A lack of enforced regulation could potentially lead to minimal overall change - as well as a lack of measurable outcomes.



“Noise levels should be not exceed 75dB(A) over a 15 minute period” is the wrong metric to be tracking. This is the kind of metric used to protect hearing from damage, not for noise pollution.

Recommendations



MANAGEMENT

1. Publish the sound management plan including dB limits (recommended and enforceable) and state orientations. What are the organisers strategies relating to:
 - a. Directional speakers, sound barriers, bass traps.
 - b. Orientation of stage(s).
 - c. Managing feedback to the engineers in real-time
2. One single phone number and email address across events:
 - a. its critical to avoid previous years lack of ability to contact on-site team
 - b. Centralising communications allows accurate logging of queries, calls, complaints. Many complaints were not plotted on the map last year.
 - c. The complaints and feedback collection system/process needs to be thorough and transparent.
3. On site-management during events with authority to enforce
 - a. The on-site team need to take proactive steps during an event, not simply collect complaints for next February
 - b. If you are hosting your location's largest event: you need to be there.
 - c. Wider -communication: many in my area were unaware of the impending solid blocks of days of booming sound.

TEST - Understanding the Issue

1. Real-world tests need to be made, from which enforceable requirements can be determined.
2. The Soundchecks are too close to the events to allow any reorientation of stages based on acoustic tests or weather
3. Soundchecks required on Waterworks multi-stage events

SOUND LEVELS

1. Regular monitoring of noise levels at multiple points in the neighborhood, not just at the event site. 15 minute averages not adequate.
2. Enforceable levels and stage orientations - otherwise pointless - based on relation to background levels not abstract dB numbers.
3. Monitor at and in homes. Remember that it's the Human effect not a dB number that matters.
4. Qualitative as well as quantitative measurements.
5. Alter levels to account for environmental effects/weather/time-of/day

REDUCE THE ONEROUS NATURE

1. No late nights on Sunday/"school nights". Suggest 6pm finish.
2. Add respite breaks of no less than 1 hour.
3. No full-weekends. Reduce frequency/blocks.
4. Inform residents over a wider area. We got no letters.
5. What compensation or remediation can you offer affected residents?

Strict and well-planned monitoring of the sound levels during the event can help to ensure that the noise is kept within acceptable levels and build confidence with residents, and set standards with organisers. This will require independent monitoring rather than relying on the festival organizers.

Date	Day	Start	End	Activity
5 July	Wednesday	??	??	SoundCheck
6 July	Thursday	14:00	22:30	Soho House Festival
8 July	Saturday	14:00	22:30	Soho House Festival
10 August	Thursday	??	??	SoundCheck
11 August	Friday	16:00	22:30	Festival Republic
12 August	Saturday	14:00	23:30	Festival Republic
13 August	Sunday	14:00	22:00	Festival Republic
17 August	Thursday	17:00	22:30	Festival Republic
20 August	Sunday	14:00	22:00	Festival Republic
??	??	??	??	SoundCheck??
16 September	Saturday	12:00	22:30	Waterworks - multistage!
17 September	Sunday	12:00	22:30	Waterworks - multistage!

P.s. Some responses to complaining about the noise don't go down very well!

'go to the country'

"JUST LEAVE FOR THE WEEKEND"

"Hounslow Council say that their current noise monitoring for events is sufficient. Environmental health officers were not present for the RÜFÜS DU SOL concert, but equipment was placed by the organisers around Gunnersbury Park to monitor sound levels."

"It was within agreed limits"

"You live in a noisy city, what do you expect"