Finsbury Park Events Stakeholder Group Meeting	Action Notes
20 January 2025, 6pm	Online

Attending		Apologies	
Cllr Emily Arkell	Chair, Cabinet Member	Simon Farrow	Head of Parks & Leisure
Sarah Jones	Events & Partnerships Manager	Cllr Claire Potter	Brownswood Ward, Hackney
Annie Chalmers Mavor	Senior Events Officer	Cllr Alex Worrell	Stroud Green Ward, Haringey
Chris Cavalier	Parks & Greenspace Manager	Cllr George Dunstall	Stroud Green Ward, Haringey
Daliah Barrett	Licencing Manager	Kit Grieveson	Stroud Green Residents Association
Edward Ritchie	Pollution Officer		
Cllr Sarah Young	Woodberry Down Ward, Hackney		
Gina Harkell, Gerry, Hasan Djenan	Friends of Finsbury Park		
Cllr Gary Heather	Finsbury Park Ward, Islington		
Cllr Zena Brabazon, Cllr Anna Abela	Harringay Ward, Haringey		
Cllr Susan Fajana-Thomas	Hackney		
Jo Roach	Pedal Power		
Ian Sygrave, Peter Lorimar	Ladder Community Safety Partnership		
Claire Armstrong, Noel Painting, Amy Boyden	Festival Republic		
Prof Matthew Harrison, Jim Griffiths, Dani Fiumicelli	Vanguardia		
Rebekah	Parkrun		
Megan Wong	Edible Landscapes		
Tracey Lilley	Interim Head of ASB and Enforcement		
Roger Rebelo	Finsbury Park Sports Partnership		
Charlene Thorneycroft	Noise and nuisance team, Haringey		

Who	Issue	Action	Responsibility	Status

Chair	Look at ways that the vibration report and findings can be shared with those residents affected – specifically in Hackney - and wider	Cllr Arkell and officers to pick this up and develop a comms plan for report to be shared by the Council.	SJ	Ongoing
Cllr Young	Suggested that Festival Republic put the vibration report on their FP residents' website.	FR committed to make the report public so they will go away and see if it can go on their website too	SJ / Festival Republic	Ongoing
FoFP	Would like slides from meeting shared	Agreed – they will be shared along with action points arising from meeting	SJ	Completed
Chair	Draft Annual Performance Review	Stakeholder to review draft and if they have suggestions for inclusion/improvements, email these before 10 February 2025	All	
Chair	Environmental Impact Fee	All successful applicants will be emailed tomorrow with decision and details on how to claim funding	SJ	Completed
Rebekah	Contact re container in park	Park Projects team to make contact to discuss FP staff depot and request for container	SJ / GKW	
Ladder Community Safety Partnership	Funding for second Mackenzie archway	Would like to pick up the conversation on funding for the archway	SJ	Completed – sent info
Cllr Heather	Community Grants	Would like info on community funding for groups and how they can apply	SJ	Completed - sent info
Chair	Residents' letter distribution	Will discuss distribution and improvements with both FR and Krank	DB	

Next meeting:
In person – Woodside Room, George Meehan House, Woodside Park, N22
Monday 17 March, 6.30 – 8pm

Monitoring Air Quality – Finsbury Park

January 2025

Haringey LONDON

Contents

What is Air Pollution?

‘Air Quality’ refers to the air around us and how many pollutants (harmful chemicals, particles or substances) it contains.

The two main pollutants of concern that the council monitor are:

- Particulate Matter (PM 10 or 2.5) – tiny bits of solid material suspended in the air and composed of a range of substances. Sizes range from <10µm to <2.5µm respectively.

- Nitrogen Dioxide (NO_2) – one of a group of gases referred to as Nitrogen Oxides (NOx).

How do we monitor air quality?

Indicative Monitors

- Self-contained instruments that continuously monitor air pollutant concentrations – NO_2 and Particulate Matter.
- Provides an hourly breakdown of pollutant concentrations, allowing real-time “peaks” to be identified. Accuracy varies by manufacturer.
- 5 Indicative monitors have therefore been deployed strategically around Finsbury Park to target high footfall and key event areas.
- Pollutant concentrations vary by season. To ensure representative data capture, monitoring programmes should span a full calendar year.

How do we monitor air quality? – Exceedance Values

- NO_2 - the Air Quality Standards Regulations (2010) require that the annual mean concentration of NO_2 must not exceed **40 µg/m³** and that there should be no more than 18 exceedances of the hourly mean limit value (concentrations above 200 µg/m³) in a single year.

- PM_{10} - the Air Quality Standards Regulations (2010) require that the annual mean concentration of PM_{10} must not exceed **40 µg/m³** and that there should be no more than 35 exceedances of the 24 hour mean limit value (concentrations above 50 µg/m³) in a single year.

- $PM_{2.5}$ - the Air Quality Standards Regulations (2010) require that the annual mean concentration of $PM_{2.5}$ must not exceed **20 µg/m³**. The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023) require that in England by the end of 2040, annual mean concentration of $PM_{2.5}$ must not exceed **10 µg/m³**

While these are the UK Air Quality Standards, there is no concentration for $PM_{2.5}$ which is considered ‘safe’.

Finsbury Park Monitoring - Locations

- FP/01 – Carriageway close to skate plaza. Main through route for Festival Republic event traffic.
- FP/02 – Mckenzie Pavilion. Quieter during the event season and close to children's play area.
- FP/03 – New River Path. Key location for traffic associated with Krank Events.
- FP/04 – Reservoir. Middle of Festival Republic event, close to food traders. Passed closely by Kran event traffic.
- FP/05 – Athletics Track. Outside both event spaces.

Finsbury Park Monitoring – Time Periods

Background Monitoring: Pre-event season

- 26 July – 20 September 2023 and 14 May – 25 June 2024.
- All but one monitor (FP/05) were operating in the park.
- Due to monitor calibration these monitors were removed away from and replaced back in the park.

Event Monitoring: Wireless and Krank Events

- 26th June – 16th August 2024
- One monitor (FP/04) suffered a sensor failure and was replaced in July.
- FP/04 was also re-positioned to prevent interference with vehicular traffic from Seven Sisters Road.
- FP/05 was installed on 15 July 2024.

Background Monitoring: Post-event season

- 17th August – Present.
- All five monitors operating in the park.

Key Findings: Pre-event Background

		Average air pollutant concentrations recorded during each time period (µg/m3)
		Background - Pre event season
Monitor Location	Pollutant	26th July - 20th September '23 & 14th May - 25th June '24
FP/01	NO2	34.0
	PM10	15.4
	PM2.5	8.7
FP/02	NO2	18.7
	PM10	15.2
	PM2.5	8.5
FP/03	NO2	31.1
	PM10	16.3
	PM2.5	9.4
FP/04	NO2	**44.2**
	PM10	14.9
	PM2.5	8.4
FP/05	NO2	*
	PM10	*
	PM2.5	*

*Monitor was not in place during this time frame and therefore no data was recorded.

Exceedances of the NO2 annual mean Air Quality Objective of 40 µg/m3 are shown in bold.

Exceedances of the PM2.5 annual mean Air Quality Objective of 10 µg/m3 are shown in bold.

- During pre-event background monitoring period average NO_2 concentrations recorded at location FP/04 exceeded the annual air quality objective.
- This was in part due to monitor being located next to Seven Sisters Road and therefore directly influenced by vehicular traffic pollution sources.
- All other monitors recorded average pollutant concentrations below their relevant annual objectives.

Key Findings: Event Season

*Monitor was not in place during this time frame and therefore no data was recorded.

**Monitor experienced a sensor fault, resulting in data loss.

		Average air pollutant concentrations recorded during each time period (µg/m3)										
		Festival Republic Build	Major Events	Build Week	Wireless Festival	Derig	Nothing	Krankbrother Build	Large Events	Dark Week	Large Events	Derig
Monitor Location	Pollutant	26th June – 4th July	5th – 7th July	8th – 11th July	12th – 14th July	15th – 19th July	20th – 24th July	25th – 1st August	2nd – 4th August	5th – 9th August	10th – 11th August	12th – 16th August
FP/01	NO2	**51.9**	**56.2**	**51.5**	**43.2**	**63.5**	**44.5**	**46.1**	**49.7**	**45.5**	**49.9**	**46.7**
	PM10	16.2	9.9	12.2	15.9	16.5	13.4	16.7	18.7	13.0	14.0	13.9
	PM2.5	8.55	5.1	6.6	8.9	9.2	7.2	9.2	**10.6**	6.8	7.5	7.3
FP/02	NO2	24.8	38.6	37.8	28.6	39.5	26.7	31.1	34.4	29.6	34.3	34.5
	PM10	15.7	9.6	11.6	14.4	15.4	13.2	16.4	18.3	13.0	14.1	13.7
	PM2.5	8.32	5.0	6.3	7.8	8.6	7.1	9.1	**10.4**	6.9	7.6	7.3
FP/03	NO2	32.9	27.2	32.0	25.5	39.0	30.4	37.7	**40.7**	35.5	37.6	**41.1**
	PM10	16.0	9.0	11.5	14.6	15.9	13.5	16.9	19.2	13.2	14.6	14.1
	PM2.5	8.6	4.6	6.3	8.0	9.0	7.4	9.5	**11.1**	7.1	8.1	7.6
FP/04	NO2	**59.8**	**60.1**	**57.7**	**62.0**	**60.9**	15.6	14.9	15.7	13.2	14.6	15.6
	PM10	**	**	**	**	**	6.9	9.7	12.7	5.8	7.0	6.0
	PM2.5	**	**	**	**	**	4.1	6.1	7.2	2.8	3.8	3.4
FP/05	NO2	*	*	*	*	16.4	14.8	16.7	17.0	16.7	18.7	18.5
	PM10	*	*	*	*	9.7	7.6	10.8	13.0	6.0	7.3	6.2
	PM2.5	*	*	*	*	6.3	4.6	6.9	7.4	3.0	4.0	3.6

- During the FR build, events and derig, the annual NO_2 air quality objective was exceeded at locations FP/01 and FP/04 (both located within the FR event space).

- As mentioned FP/04 was re-positioned in July to prevent interference with vehicular traffic from Seven Sisters Road. However, concentrations recorded during the FR events were higher, showing their impact on air quality.

Key Findings: Event Season

*Monitor was not in place during this time frame and therefore no data was recorded.

**Monitor experienced a sensor fault, resulting in data loss.

		Average air pollutant concentrations recorded during each time period (µg/m3)										
		Festival Republic Build	Major Events	Build Week	Wireless Festival	Derig	Nothing	Krankbrother Build	Large Events	Dark Week	Large Events	Derig
Monitor Location	Pollutant	26th June – 4th July	5th – 7th July	8th – 11th July	12th – 14th July	15th – 19th July	20th – 24th July	25th – 1st August	2nd – 4th August	5th – 9th August	10th – 11th August	12th – 16th August
FP/01	NO2	**51.9**	**56.2**	**51.5**	**43.2**	**63.5**	**44.5**	**46.1**	**49.7**	**45.5**	**49.9**	**46.7**
	PM10	16.2	9.9	12.2	15.9	16.5	13.4	16.7	18.7	13.0	14.0	13.9
	PM2.5	8.55	5.1	6.6	8.9	9.2	7.2	9.2	**10.6**	6.8	7.5	7.3
FP/02	NO2	24.8	38.6	37.8	28.6	39.5	26.7	31.1	34.4	29.6	34.3	34.5
	PM10	15.7	9.6	11.6	14.4	15.4	13.2	16.4	18.3	13.0	14.1	13.7
	PM2.5	8.32	5.0	6.3	7.8	8.6	7.1	9.1	**10.4**	6.9	7.6	7.3
FP/03	NO2	32.9	27.2	32.0	25.5	39.0	30.4	37.7	**40.7**	35.5	37.6	**41.1**
	PM10	16.0	9.0	11.5	14.6	15.9	13.5	16.9	19.2	13.2	14.6	14.1
	PM2.5	8.6	4.6	6.3	8.0	9.0	7.4	9.5	**11.1**	7.1	8.1	7.6
FP/04	NO2	**59.8**	**60.1**	**57.7**	**62.0**	**60.9**	15.6	14.9	15.7	13.2	14.6	15.6
	PM10	**	**	**	**	**	6.9	9.7	12.7	5.8	7.0	6.0
	PM2.5	**	**	**	**	**	4.1	6.1	7.2	2.8	3.8	3.4
FP/05	NO2	*	*	*	*	16.4	14.8	16.7	17.0	16.7	18.7	18.5
	PM10	*	*	*	*	9.7	7.6	10.8	13.0	6.0	7.3	6.2
	PM2.5	*	*	*	*	6.3	4.6	6.9	7.4	3.0	4.0	3.6

- During the Krank events and derig, the annual NO_2 air quality objective was exceeded at location FP/03. This monitor is located closest to the Krank event space.

- During the Krank build, events and derig, the annual NO_2 air quality objective continued to be exceeded at FP/01 – influence of event traffic and background concentrations.

Key Findings: Event Season

*Monitor was not in place during this time frame and therefore no data was recorded.

**Monitor experienced a sensor fault, resulting in data loss.

		Average air pollutant concentrations recorded during each time period (µg/m3)										
		Festival Republic Build	Major Events	Build Week	Wireless Festival	Derig	Nothing	Krankbrother Build	Large Events	Dark Week	Large Events	Derig
Monitor Location	Pollutant	26th June – 4th July	5th – 7th July	8th – 11th July	12th – 14th July	15th – 19th July	20th – 24th July	25th – 1st August	2nd – 4th August	5th – 9th August	10th – 11th August	12th – 16th August
FP/01	NO2	**51.9**	**56.2**	**51.5**	**43.2**	**63.5**	**44.5**	**46.1**	**49.7**	**45.5**	**49.9**	**46.7**
	PM10	16.2	9.9	12.2	15.9	16.5	13.4	16.7	18.7	13.0	14.0	13.9
	PM2.5	8.55	5.1	6.6	8.9	9.2	7.2	9.2	**10.6**	6.8	7.5	7.3
FP/02	NO2	24.8	38.6	37.8	28.6	39.5	26.7	31.1	34.4	29.6	34.3	34.5
	PM10	15.7	9.6	11.6	14.4	15.4	13.2	16.4	18.3	13.0	14.1	13.7
	PM2.5	8.32	5.0	6.3	7.8	8.6	7.1	9.1	**10.4**	6.9	7.6	7.3
FP/03	NO2	32.9	27.2	32.0	25.5	39.0	30.4	37.7	**40.7**	35.5	37.6	**41.1**
	PM10	16.0	9.0	11.5	14.6	15.9	13.5	16.9	19.2	13.2	14.6	14.1
	PM2.5	8.6	4.6	6.3	8.0	9.0	7.4	9.5	**11.1**	7.1	8.1	7.6
FP/04	NO2	**59.8**	**60.1**	**57.7**	**62.0**	**60.9**	15.6	14.9	15.7	13.2	14.6	15.6
	PM10	**	**	**	**	**	6.9	9.7	12.7	5.8	7.0	6.0
	PM2.5	**	**	**	**	**	4.1	6.1	7.2	2.8	3.8	3.4
FP/05	NO2	*	*	*	*	16.4	14.8	16.7	17.0	16.7	18.7	18.5
	PM10	*	*	*	*	9.7	7.6	10.8	13.0	6.0	7.3	6.2
	PM2.5	*	*	*	*	6.3	4.6	6.9	7.4	3.0	4.0	3.6

- Whilst there were no exceedances of the PM10 annual objective at any of the monitoring locations, there were two exceedances of the PM2.5 annual objective at FP/02 and FP/03 during the Krank events.

Key Findings: Post-event Background

		Average air pollutant concentrations recorded during each time period (µg/m3)
		Background – Post Event Season
Monitor Location	Pollutant	17th August 2024 – 19th January 2025
FP/01	NO2	**47.0**
	PM10	15.0
	PM2.5	9.3
FP/02	NO2	33.9
	PM10	14.7
	PM2.5	8.9
FP/03	NO2	32.9
	PM10	16.7
	PM2.5	**10.6**
FP/04	NO2	23.2
	PM10	27.0
	PM2.5	**16.5**
FP/05	NO2	25.9
	PM10	17.7
	PM2.5	9.6

- During post-event background monitoring period, average NO_2 concentrations recorded at location FP/01 exceeded the annual air quality objective.
- The annual PM2.5 air quality objective was also exceeded at locations FP/03 and FP/04.
- This demonstrates that while the events held at Finsbury Park do have an impact on the local air quality, exceedances of the annual objectives can still occur despite no events being held.
- This is due to several reasons:
  - London's background air quality
  - Seasonal variations in pollutant levels
  - Meteorological impacts
  - Trans-boundary nature of air pollutants

Key Findings: Next Steps

- This monitoring study provides data that indicates the events and their associated use of vehicles and internal combustion generators, increases the concentrations of air pollutants in the park.

- However, it is also clear that exceedances occur in the park during background conditions i.e. when no events are being held within the park.

- Further analysis and discussions will happen with event organisers to determine long-term actions to prevent the deterioration of local air quality. Some measures include:
  - Installation of a mains power supply to Finsbury Park
  - Increased use of EV vehicles during event operations
  - Ensuring event organiser's anti-idling vehicle policies are fit for purpose and enforced
  - Tightening of London's Non-Road Mobile Machinery emission standards

- Haringey's participation in the Pan-London 'Beyond Construction' Project. Aims to assess the age, size, and environmental impact of the current machinery used within the events sector. Allows us to understand if and where improvements can be made to the current machinery.

Questions?

Finsbury Park Events
Annual Performance Review - 2024

January 2025

Contents **Page**

1. Introduction

With the introduction of long-term hire agreements for Finsbury Park events in 2023, rather than annual agreements, the Council committed to add an additional mechanism of evaluation to ensure that each year there is a review of the running of the contract and that a joint annual improvement plan is agreed and implemented for the following seasons events.

Several existing controls are in place and will continue to be used to monitor events to ensure compliance with the park hire contract and premises licence. In addition to this, a regular programme of varying stakeholder engagement takes place, ensuring feedback is invited and acted upon, and that mitigations and improvements are implemented.

This report seeks to set out those existing mechanisms and details the performance of the events which ran in Finsbury Park over the summer of 2024. The report provides an overview of events that took place in 2024, noting any significant changes seen and an analysis of complaints and key issues experienced. All of this information will be placed into an action plan for 2025 improvements.

Both within the body of this report and at *Appendix 1*, an overview of improvements identified following the 2023 events can be found together with actions that were taken in 2024.

2. Existing Controls

2.1 Park Hire Contract / General Terms and Conditions of Hire

Park Hire Contract

The Council has a well-developed park hire contract which stipulates clear conditions under which the park can be used. Breaching any of these conditions can lead to either rectifying the breach or termination of the contract.

The full park hire contract stipulates several points around the management of the event, and the protection of the park infrastructure and visitors.

The full park hire contract is only instigated where significant income and footfall is expected, adding an enhanced layer of protection to both the council and the park.

The Park Hire Contract is overseen by council officers who are in attendance at all events.

General Terms and Conditions of Hire

For smaller events, on application of hire, the applicant agrees to a set of standard terms and conditions of hire. These set out hire terms that the hirer is expected to follow. Many of the smaller events that take place in Finsbury Park do not need a Premises Licence or Temporary Events Notice as they are not providing regulated activity such as playing music, or the sale of alcohol.

In 2023 conditions around usage in extreme wet weather were strengthened following the Tough Mudder event which took place in April 2022. This now gives the council, the ability to reschedule, postpone or cancel events if wet weather is experienced without any liability to the council.

Pre and Post Site Inspection

For all events a pre and post site inspection is carried out before the tenure of the hire starts and after it ends. This is to ensure hirers know of their full obligations whilst in the park and to check the condition of the hired space and all routes into it.

A post site inspection is done once the hire has ended and any damage or expenses incurred by the council to rectify damage etc is taken from the refundable grounds deposit. If costs total more than the grounds deposit, the hirer is legally bound by either the hire contract or Ts & Cs to pay all outstanding rectification costs.

2.2 Premise Licence Oversight

For the large and major music festival events – namely those run by Festival Republic and Krankbrother - the use of the park can only take place if a premises licence is in place. The premises licence has its own safeguards to ensure the four licensing objectives are fulfilled.

The organiser must satisfy the Safety Advisory Group that it has a safe plan for the event and the Safety Advisory Group must sign this off no later than 30 days prior to the event taking place.

Both Festival Republic and Krankbrother hold indefinite premises licences. If there is significant concern that any of the four licencing objectives are not being met or have been breached, then someone is able to call a review of the licence, but they must have evidence to prove that a breach has happened.

Noise Monitoring

Noise limits are based on the individual licence conditions. There are approved locations representative of noise sensitive premises likely to experience the greatest increase in noise levels because of events held in Finsbury Park.

Each licence holder is required to provide specialist noise monitoring throughout the event and concerns are responded to in real time. All noise monitoring locations are monitored, and event organisers will provide house visits to complainants to check noise limits at individual complainants' properties.

In addition to this council noise officers are on call to respond to complaints received directly to the council, and all information is fed back to the event so that where needed, adjustments can be made.

Each monitoring location is reassessed once a year to check the background levels in readiness for the noise management planning for the following year.

2.3 Stakeholder Engagement

An existing programme of stakeholder engagement, pre, during and post events is held to address issues and either make improvements in advance of the events, in real time or action for the following year.

Finsbury Park Events Stakeholder Group

With the introduction of the Outdoor Events Policy, the Finsbury Park Events Stakeholder Group was formed. Chaired by the Cabinet Member with responsibility for parks, membership from Haringey, Hackney and Islington includes:

- Council officers covering parks, regulatory services, highways, building control etc
- Ward members
- Finsbury Park user groups
- Resident Associations
- Traders Associations

In March 2024 a new Terms of Reference for the Stakeholder Group was adopted, after being updated to reflect the wider membership of the group, as well as setting out topics for discussion at each of the five meetings planned for the year. Topics discussed in 2024 included:

24 Feb – 2023 overview, EIF, proposed 2024 calendar
13 May – Festival Republic attended to give overview
25 June – cancelled due to pre-election period (general election)
8 Oct – Event de-brief
9 Dec – postponed until 20 January ‘25

The tri-borough group aims to meet five times a year – 3 meetings before and 2 meetings after the events.

Although the Stakeholder Group was specifically formed to discuss events in Finsbury Park: to share the event management plan and inform where improvements may be needed, in recent years the remit has extended to cover all topics relating to the park including safety, infrastructure, and issues encountered all year round.

LBH Member Engagement

In 2023 a series of Haringey ward member meetings was instigated. Members from Harringay, Stroud Green and Hermitage and Gardens wards, meet with the Cabinet Member and park’s officers quarterly to discuss a range of issues relating to Finsbury Park that crop up throughout the year, including events. A series of meetings took place in 2024 and will continue into 2025.

Resident and Member Engagement

Festival Republic and Krankbrother host resident engagement meetings in the run up to and following the seasons events, to present their event management plans and provide an opportunity to residents to feed back their experiences of the events. Members from relevant wards are invited to these meetings.

Festival Republic

For several years Festival Republic has had direct contact with both Islington and Hackney officers and ward members to discuss issues that specifically affect their residents. Through these discussions, key resident representatives have been identified and meetings are held in advance of the events.

Event days meetings are also held for residents to discuss issues in real time and where necessary, improvements are implemented for the following event day(s).

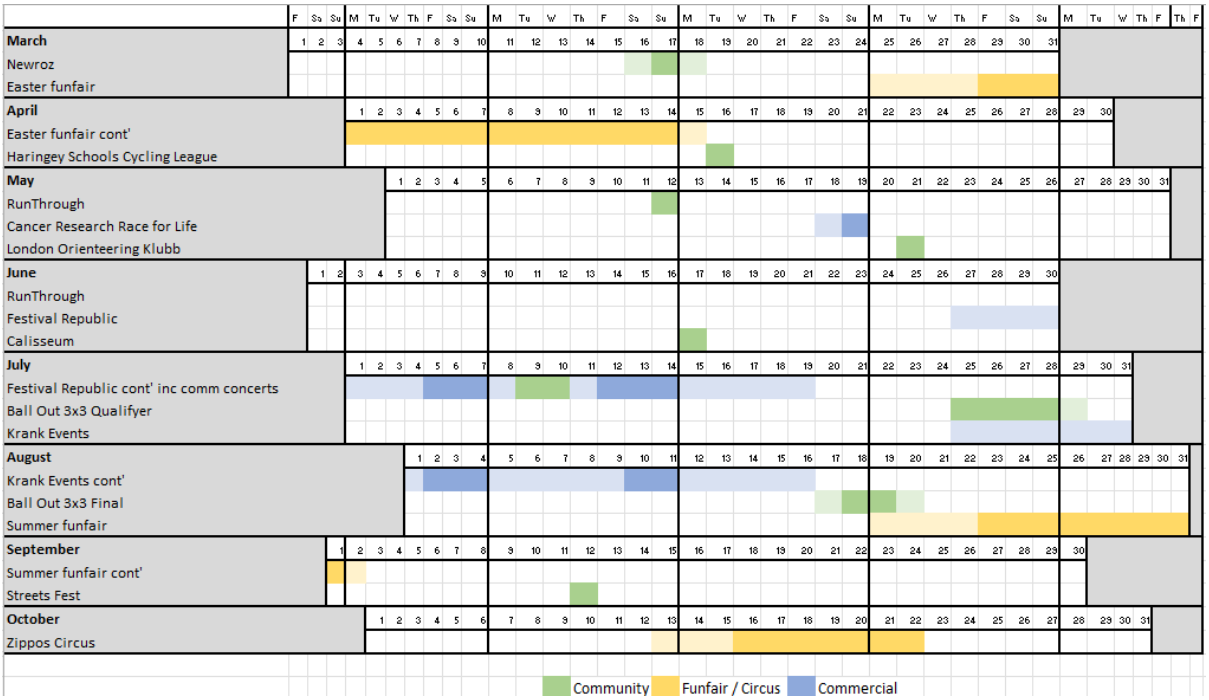
Until 2023 there was little interest in Festival Republic hosting these meetings for Haringey resident reps, mainly due to them being directly engaged through the Finsbury Park Events Stakeholder Group. However, local Haringey ward members and stakeholders were invited to the 2024 event day meetings to highlight any issues which will continue in 2025.

Krankbrother

Krankbrother also hold resident engagement meetings in advance of the events, to present management plans and answer questions. They also hold one meeting following the events to gather feedback whilst fresh. These meetings will continue annually.

3. 2024 Events

3.1 Overview of Events in 2024



In 2024 Finsbury Park hosted 23 events, held over 59 event days. 54 build, break and rest days were also used. Estimates show nearly 400,000 enjoyed events held in the park.

The largest hire was that of Festival Republic who used 31% of the physical space to the south of the park. The second biggest was the hire by Krankbrother to facilitate their 5 days of events. The space used for this in the northeast part of the park equated to approximately 7%.

A host of other sporting runs and cycling proficiency lessons were held for the public to watch.

The event running for the longest duration of 17 days (plus 5 build/break days) was the Easter funfair. Provided by Manning's Amusements for over 50 years, the site based near Finsbury Gate covered approximately 4% of the park and had over 20,000 visits.

The event year started with the Kurdish new year celebratory event Newroz, taking place in March. The year ended with Zippo's circus leaving the park in October.

3.2 Festival Republic

Festival Republic returned to Finsbury Park to host their events in which 45,000 people a day attended to see the Woolfe Tones, Michael Bibi and Hozier, followed by the three-day Wireless weekend.

Significant Changes

A key change to the site design for 2024 saw the closure of the path running between Oxford Road and Stroud Green Road on the Wireless weekend only. This was a pro-active measure agreed by the Council, Police and Festival Republic to deter some anti-social elements that

had been experienced in 2023. Access for those wishing to use the skatepark and tennis courts was maintained.

Although the management of the closure worked well overall, key changes to this will be made in 2025. Better access to the tennis courts is needed to ensure those of all abilities aren't hindered by the infrastructure. Also, placement of parts of the fence line will be redesigned so as not to impinge onto the pathway access when it is open.

A couple of incidents were also reported regarding conflict between cyclists and pedestrians using this pathway. Improvements will be further explored and implemented in 2025.

Side street security issues were raised during the multi-use weekend in 2023. Some of the placement of promised infrastructure and staff to close off some of the side roads off Seven Sisters was delayed. This was a specific focus for 2024, which resulted in both a reduction in complaints received regarding ASB in side streets and positive feedback from ward members.

England reached the finals of the 2024 Euro's, so the decision was taken to close the Sunday event at 7.30pm rather than 9.30pm as planned to avoid any crowd clashes occurring in both the local area and central London. This early closure was agreed by the Safety Advisory Group with key members implementing the changes at very short notice.

Action: *LBH to work with Festival Republic to improve the design of the fence line to improve access to both the pathway and tennis courts and to ensure conflict between cyclists and pedestrians is addressed.*

Complaints Summary

A total of 148 complaints were logged throughout the hire and event periods.

A full summary of complaints received can be viewed at Appendix 2. However, a summary of has been included below.

Multi Event weekend summary

A total of 40 complaints were made this year over the multi-event weekend, compared to 75 made in 2023. This shows a decrease of 47% of contacts made via the residents' hotline.

During the same weekend in 2023 33.33% of the complaints made were in relation to on-site music noise. This was a significant reduction in comparison to the 2022 figures, in which 69.35% of complaints over the same weekend were regarding sound levels.

Although in 2024 the percentage dropped slightly to 32% the number of actual complaints made decreased significantly. Those made in 2024 regarding on-site noise amounted to 13 complaints whereas in 2023 there were 25.

The decrease in overall complaints received in 2024 compared to 2023 can possibly be attributed to complaints regarding vibration decreasing significantly. Only 5 complaints were

received on the Saturday of the 2024 multi-event weekend, compared to 14 in 2023. This may have been to do with Festival Republic having installed monitoring equipment in local homes during the events.

Wireless weekend summary

Over the 2024 Wireless weekend 61 complaints were logged compared to the 222 for the same weekend in 2023. This shows a reduction in complaints by nearly three quarters. 30% more complaints were received during the Wireless weekend compared to the multi-event weekend, showing a similar trend year on year.

Of these complaints, there was a sharp decrease again in complaints relating to issues of vibrations. Half of complaints made in 2023 were to do with vibrations whereas only 22% in 2024.

A decrease was also seen in complaints made in relation to any form of anti-social behaviour compared to previous years.

Council Received Complaints

In total, the Council directly received complaints dropped to 20 this year compared to 69 complaints received regarding the Festival Republic hire in 2023. These mostly related to the Outdoor Events Policy and the use of Finsbury Park for major events.

3.3 Krankbrother

Krankbrother held their fifth year of events in Finsbury Park. Based in a section in the north-east of the park, the events saw just under 50,000 people attend the two stage music events held over five days.

Significant Changes

Krank were successful in gaining a revised Premises Licence to increase their daily capacity from 8,000 to 9,999, plus the ability to host a sixth day of events. However, despite their ability through the Premises Licence to host a sixth event day, the decision was made to keep the park hire at 5 days for 2024.

The hired event space was revised for 2024 to reflect the increase in daily attendees as well as to ensure additional measures were in place to protect the site and trees within it.

The overall hired space increased from 5% to 7% of the overall park space. An additional trackwayed ring-road was installed on grass around the site for heavy vehicles to use, rather than traversing over grass. Better protection of trees was also placed including heras fencing placed around key trees, and trackway and mulch placed at the highest footfall areas.

Krank hired an ecologist to be on site during the build and break periods overseeing contractors, ensuring that tree root systems were cordoned off and that no heavy infrastructure was placed on them.

Complaints Summary

A full breakdown of complaints is attached at Appendix 3, however a summary is provided below with comparisons to the 2023 complaints received.

	Friday 2 August	**Saturday 3 August**	**Sunday 4 August**		**Saturday 10 August**	**Sunday 11 August**
Timings	*16:30 – 22:00*	*13:00 – 22:00*	*13:00 – 21:30*		*13:00 – 22:00*	*13:00 – 21:30*
Event	*Bicep*	*Solomun*	*Anjunadeep*		*Four-Tet*	*Keinemusik*
Attendance	*9,999*	*9,999*	*9,999*		*9,999*	*9,999*
2024 complaints, compared to 2023						
2024 total complaints	38	35	6		7	5
Complaints received via residents' line	23	18	5		6	5
Complaints received via council (noise team / social media)	15	17	1		1	0
2023 total complaints	5	27	17		9	4
Noise complaints only						
2024	38	34	6		7	5
2023	5	25	15		8	4

In comparison to 2023, the number of complaints received in 2024 were higher than over the comparative 5 days of events - 91 received in 2024 compared to 62 received in 2023.

However, this could be down to the fact that complaints made directly to the council's noise team, or received via social media were being forwarded, logged and responded to by the Krank residents' line, which hadn't happened in previous years.

All complaints made with the exception of one, were regarding the noise. In 2023 a few complaints were made regarding the use of the park, and ecology, but none of this type of complaint were received over the 2024 event days.

Timings of complaints

The table below shows a breakdown of time periods complaints were received by the residents' line. These do not show the council received complaints as these were not logged in real time.

	Before 11am	11:00-12:00	12:00 - 13:00	13:00-14:00	14:00 - 15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-00:00
Friday 2 August			1			1	2	3	3	2	3	5	2	1
Saturday 3 August				2	1	1				2	6	5	1	
Sunday 4 August								1	1		2	1		
Saturday 10 August							1				2	3		
Sunday 11 August						1		3			1			
	Event running times													

As with 2023, the majority of complaints were received between 8 and 10pm.

Four calls were made complaining of noise, after the events had finished, and two were received complaining of the sound checks taking place before the event had started.

Council Received Complaints

In addition to the above, the council also received seven complaints following the events. Four were from those who had already complained to the residents' line, forwarded by Members, two were from residents complaining of excessive noise, and one was complaining of urination in the park by festival goers.

Noise Monitoring

Vanguardia was commissioned by Krankbrother to independently monitor and provide feedback for the management of noise and investigate noise complaints over the two weekends of events.

The aim of the noise monitoring plan is to ensure that noise levels at the nearest noise sensitive receptors beyond the park boundary do not exceed specified values and to investigate complaints that may come from further afield.

Key points made within their end of project report which can be found at Appendix 4 include:

- Noise impacts were greatest to the east and southeast of the park i.e. locations on axis to the main stage, and where the westerly to south-westerly winds were influencing the spread of noise.
- Noise levels at locations stipulated within the premises licence confirmed that the music noise levels were within the required limits.
- Noise levels were greatest at the Rowley Gardens location east of Green Lanes as this is nearest to the event site.
- Music noise monitored levels at all other locations, including the vicinity of complaints, were lower than at Rowley Gardens; and were therefore below, in most cases by wide margin.

- Several complainants volunteered as part of the conversation that they had been prompted to complain by postings on resident Facebook, WhatsApp groups and other social media.
- Although complaint numbers varied on each day with a general trend for rapid drop in numbers after the first and second day, there were no significant differences in the noise levels measured on site and at the licence monitoring locations between each of the five event days.
- Low frequency content of music, i.e. bass noise, was the most common issue raised by complainants.
- Several complainants expressed the view that noise levels were higher at the top floors of tower blocks than at ground level i.e. Woodberry Down estate. These tower blocks are between around twice to about give times further away as the monitoring locations set within the licence, consequently the levels will be substantially lower at the tower blocks compared to the licenced locations closer to the event.

3.4 Haringey Community Events

As part of the Festival Republic hire, the council has been able to use infrastructure from the major events to host its own community events, sponsored by Festival Republic.

Finsbury Fest

This year we saw the return of Finsbury Fest for its second year following a successful launch in 2023, showcasing local talent and providing a platform for them to perform for the community on a large-scale festival stage.

The evening saw acts from Haringey, Islington and Hackney come together for a brilliant evening of entertainment which was attended by over 300 members of the local community event despite another year of rain.

The feedback from those performing and those in the audience were incredibly positive and we look forward to seeing the event return in 2025.






Action: *To facilitate the return of Finsbury Fest for 2025*

School's Summer Music Concert

The Finsbury Park School Summer Festival returned once again this year and for the first time, saw Haringey, Islington and Hackey Music Service take part with young people from all three broughs coming together for a brilliant evening showcasing our young people's talent. The event organised by Haringey's Music and Events Teams and gave the opportunity of performing in a festival setting to hundreds of under 18s perform in front of over 250 attendees, and once again, the event was a hit!

Action: *To facilitate the return of the tri-borough music event in 2025*

4. Key Issues for Improvement

4.1 Vibrations

In 2024 Festival Republic commissioned Vanguardia to conduct a second study to further understand why vibrations were affecting some buildings in the local area, and to determine thresholds relating to cosmetic damage of properties. The full report can be found at Appendix 5.

The main findings of the vibration study for events held at Finsbury Park in July 2024 are summarised below:

- There were no characteristic circa 2 Hz vibration events detected during Finsbury Park Concerts (Friday 5th to Sunday 7th July 2024).
- The maximum vibration level detected during Wireless Festival 2024 (Friday 12th to Sunday 14th July 2024) was similar to the maximum level detected during Wireless Festival 2022.
- Otherwise, the levels detected in the wider 2024 survey are typically lower than those reported in 2022.
- The bursts of vibration lasted typically for 10 seconds at a time.
- The vibration amplitudes of all the characteristic circa 2 Hz building sway events are below the threshold of 0.6 mm dynamic deflection, below which there is no credible evidence of vibration-induced cosmetic damage to building fabric (such as the cracking of fine plasterwork), and are therefore significantly below the levels needed to induce structural damage.

Action: *LBH will continue to work with Festival Republic and neighbouring boroughs to respond and provide reassurance to residents regarding the findings*

4.2 Ecology and Tree Protection

As already mentioned earlier in this report, extra measures were implemented, mainly by Krank Events, to further protect their site during the 2024 hire period. The full post ecological review report produced by Krank's ecologist can be found at Appendix 6.

These additional measures included increased protection for trees including perimeter fencing and tape, the laying of flooring and mulch to enhance protection in high footfall areas, and the introduction of an internal trackwayed, site ring-road keeping heavy vehicles off grassed areas.

In addition, the council committed to introducing a programme of site inspections by officers of the Trees and Nature Conservation Team to ensure that hire stipulations were being adhered to.

A number of these site visits took place with officers being satisfied that all agreed protections were implemented and being adhered to. Their full report can be viewed at Appendix 7.

The Habitat Management Plan is currently being developed. The initial steps to produce this include Initial Assessment, Stakeholder Consultation, Objective Setting, Action Plan Development, Monitoring and Evaluation. Officers are at the initial assessment step, where they are conducting surveys and data gathering of the existing habitats, flora, and fauna within the park. Typically, the completion of such a plan can take around 6 to 12 months.

Actions: *Officers from the Finsbury Park Operations and Tree and Nature Conservation Teams will continue to work on developing further all-year plans focused on improving the health for all trees, and specifically those located within any hired areas.*

The development of the Habitat Management Plan will continue, co-produced with stakeholders.

4.3 Air Quality

Air quality monitors were installed at key locations throughout Finsbury Park in 2024. These will monitor year-round and will provide data on air quality levels within the park.

A full report on initial findings is attached at Appendix 8. However further monitoring is needed to fully understand all year-round air quality levels in Finsbury Park.

Action: *Continue to analyse figures and work LBH Pollution Officers and hirers to develop long term action plan for improvement.*

4.4 Wet Weather Grounds Protection

The two weekends of July events experienced rainfall. Emergency measures were implemented during the first weekend which saw some extra trackway and woodchip used for areas significantly impacted by the wet weather.

In preparation for the second weekend, extra ground protection was brought to site and laid in higher footfall areas to ensure both the ground didn't become further damaged by the wet weather and that these areas were safe for event attendees.

Wood chip is difficult to gather up following events, especially once it's been ground into mud, and can take a long time to break down so the council has committed to ban the use of this unless in emergencies. Therefore, officers have requested that Festival Republic developed an improved wet weather plan which will see a staged plan of grounds protection. This is likely to include varying stages of proposed grounds protection such as Stage 1: general grounds protection which is installed as standard; Stage 2: having a supply of matting on site to use if and when rain is experienced; Stage 3: grounds protection on standby off site, to be called in when needed.

Action: *LBH to continue to work with Festival Republic to develop sufficient wet weather grounds protection plan*

4.5 Site Handover

Following the injury sustained by a dog on a piece of infrastructure left in shrubs, officers will be working with Festival Republic to develop improved site handover procedures. Festival Republic has committed to tightening those that are already in place with their contractors and the council will be ensuring that once the hired space is handed back to the council by the hirer, sufficient procedures will be in place to double check the entire site.

Action: *Site handover procedure strengthened by Festival Republic and developed by LBH*

4.6 Rectification Works

Delays continue to occur when commissioning contractors to carry out repairs needed to hard assets once the hire period has finished. This is due to a number of elements, but mainly the required procurement processes the council uses.

Works following the 2024 have now taken place. Some areas of carriageway and paths where we know experience high traffic have been strengthened. By introducing a base layer of concrete, topped with tarmac, it is hoped that less rectification works will be needed in future years. Officers will continue to work with hirers to ensure stringent protection measures are in place.

Future proofing key areas has also been done with the fence panels that are removed during the Festival Republic hire. In 2024 new fence post footings were installed ensuring that future removal and replacement can be done easily and quickly.

That said there is always the risk that some rectification works will still be needed so officers will be investigating if there is a quicker way to have contractors on standby to ensure works are done as soon as possible after the hire period has finished.

Actions: *Officers to ensure sufficient protections are planned*

Officers to investigate alternative faster procurement routes

5. Income and Improvements

5.1 Overview of Income and Expenditure

Income

Since 2012 the Council has generated £8.7m from events, filming, property and associated fees and charges in Finsbury Park. A breakdown of the annual income over those 12 years is shown below. Of that £8.7m, events in the park have contributed £7.4m.

Eleven Year Summary

Total Revenue Expenditure	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Total over 11 years	Yearly Average
Employees	£ 332,400	£ 297,907	£ 294,067	£ 378,438	£ 382,977	£ 480,951	£ 604,536	£ 840,108	£ 871,626	£ 798,343.35	£ 900,060.04	£ 6,181,412	£ 561,946.54
Premises Related Expenditure	£ 43,060	£ 85,130	£ 53,356	£ 75,789	£ 63,756	£ 82,189	£ 98,854	£ 178,023	£ 70,157	£ 100,601.97	£ 243,942.82	£ 1,094,859	£ 99,532.61
Transport Related Expenditure	£ 34,002	£ 33,797	£ 31,940	£ 27,044	£ 21,527	£ 19,949	£ 40,275	£ 42,743	£ 30,163	£ 36,635.86	£ 33,439.71	£ 351,516	£ 31,956.01
Supplies & Services	£ 106,717	£ 66,976	£ 55,015	£ 65,218	£ 64,023	£ 111,761	£ 109,065	£ 232,561	£ 125,230	£ 101,180.12	£ 185,688.76	£ 1,223,436	£ 111,221.48
Third Party Payments	£ 59,211	£ 69,742	£ 61,717	£ 115,668	£ 56,804	£ 26,849	£ 114,823	£ 289,332	£ 123,892	£ 124,408.58	£ 155,066.92	£ 1,197,513	£ 108,864.85
Support Services	£ 53,185	£ 80,685	£ 98,274	£ 58,074	£ 79,520	£ 84,678	£ 259,577	£ 211,857	£ 227,368	£ 211,320.50	£ 91,226.50	£ 1,455,765	£ 132,342.29
Total	£ 628,576	£ 634,237	£ 594,369	£ 720,231	£ 668,606	£ 806,377	£ 1,227,131	£ 1,794,624	£ 1,448,437	£ 1,372,490	£ 1,609,425	£ 11,504,502	£ 1,045,863.78
Investments	£ -	£ -	£ 128,424	£ 458,052	£ 200,066	£ 79,000	£ 190,129	£ 644,165	£ 176,303	£ 132,615	£ 467,420	£ 2,476,174	£ 225,106.73
Total Expenditure + Investment	£ 628,576	£ 634,237	£ 722,793	£ 1,178,283	£ 868,672	£ 885,377	£ 1,417,260	£ 2,438,789	£ 1,624,740	£ 1,505,105	£ 2,076,845	£ 13,980,676	£ 1,270,970.51
Income	£ 179,924	£ 244,487	£ 919,162	£ 940,125	£ 726,898	£ 942,570	£ 1,493,564	£ 1,263,111	£ 195,529	£ 491,699	£ 1,311,365	£ 8,708,434	£ 791,675.78
Cost to the Council	£ 448,651	£ 389,750	-£ 196,369	£ 238,158	£ 141,774	-£ 57,193	-£ 76,304	£ 1,175,678	£ 1,429,211	£ 1,013,406	£ 765,480	£ 5,272,242	£ 479,294.73
									COVID YEARS				

Income has varied year on year both as the popularity of events has increased, but also following the impact of the Covid-19 restrictions during 2020 and 2021. In the three years prior to 2020, the average income from events in the park was £1.1m per annum. In 2022 the first full year after the pandemic the park also generated £1.1m from events. During 2023 this average was exceeded with income from events generating approximately £1.27m, and is on target to be similar in 2024.

Spending of Income

The overall cost of maintaining Finsbury Park is circa £1.61m. In addition, a further £0.47m was spent improving the park. This total expenditure of £2.08m was funded by £1.31m of income from all sources in the park. The balance of £0.77m being funded by Council revenue or capital expenditure.

There are four key areas of spending of the income generated in the park. The first is to fund the base level of management that all parks in the borough receive. The second area of spend is on an additional level of staffing resources dedicated to Finsbury Park. The third area of spend is the cost of the events team who generate the income and manage the delivery of the events. The fourth area is the money available to reinvest in the park to improve or add new facilities in the park.

Base Level Parks Management: Finsbury Park's management forms part of the wider management of parks in the borough and receives input from a range of shared service delivery e.g. playground maintenance, machinery, grass cutting, The Conservation Volunteers, and other similar services. This cost includes the wider management structure

beyond Finsbury Park. This is recharged to the park on the basis of a 14.5% percentage share. 14.5% represents the percentage that Finsbury Park represents within all parks and greenspaces in the borough.

Additional level of staffing: In response to various concerns about the level of maintenance in the park and the need for a greater visible presence, the staffing structure in the park has been supplemented to include a dedicated manager, a park ranger, additional gardeners, and cleansing operatives. In total this added a further 11 posts to existing base level of 3 full time staff. Due to uncertainty of future years income to fund these staff the posts have only been temporary. However, following the signing of the five-year agreement with Festival Republic the Council is now able to make these post permanent, which will allow the staff to benefit from the councils' terms and conditions.

Events Team: Events held in the park need to be administered and managed otherwise there would be no events or income. Events are also held in other parks and therefore part of the events team cost is met from other events, but the lions share 93-95% is funded by events in Finsbury Park.

Reinvestment: Circa £1m - £1.1m of all income generated by the park is used to offset these costs. Leaving around £0.2m-£0.3m per annum to reinvest in projects. In addition, when sufficient events income isn't available (e.g. during Covid pandemic) or when the parks needs dictate e.g. new street lighting the Council, does supplement the improvements in the park from its own resources.

Since 2019/20 the Council has invested £1.42m in the park of which £0.82m was from events and £0.6m was from Council capital expenditure. This is broken down as follows:

- £271k - landscape improvements in the run up to the 150th anniversary
- £805k - improved play provision in the park, including the Richard Hope Play Space
- £291k - new street lighting in the park
- £12k - phase 1 improvements in the Nursery
- £15k - toilet refurb (2019)
- £26k - initial work on the skateboard project

In addition, there have been other improvements in the park funded from other sources, such as the CCTV system and the Changing Places Toilet.

During the 2024/25 financial year the focus for investment has been on the completion of the Skate Park project with the Friends, as well as other pieces of work on finishing up the Richard Hope Play space, the installation of five air quality monitoring stations in the park and on the Boundary Review project.

The impact of using event income to fund the Base Level Parks Management Service in Finsbury Park has meant that savings from other parks have not had to be made and therefore although not directly funded from events income the standard of maintenance in other parks has been able to be maintained and protected.

5.2 Environmental Impact Fee

An Environmental Impact Fee is added to all park hires, with the exact figure determined through the setting of the annual fees and charges by Cabinet. The type, size and duration of the event determines how much is charged.

The EIF is set aside for Friends and stakeholders of the park to use for improvements or activities that will benefit the park and community. Over the last 8 years (apart from 2020 which was affected by Covid) over quarter of a million pounds has benefited local groups and projects. The table below details how this money has been allocated up to 2023.

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Pedal Power	£ 10,950.00	£ 10,000.00	£ 9,600.00	*Affected by Covid*	£ 3,500.00	£ 8,808.19	£ 12,000.00	*Yet to be allocated*	£54,858.19
Park Run	£ 600.00				£ 1,000.00		£ 752.67		£ 2,352.67
Furthrfield	£ 10,000.00	£ 10,000.00	£ 9,600.00			£ 6,021.22	£ 2,500.00		£38,121.22
Edible Landscapes	£ 9,950.00	£ 10,200.00	£ 9,600.00		£ 3,500.00	£ 7,328.69	£ 11,500.00		£52,078.69
LCSP		£ 10,000.00	£ 9,600.00						£19,600.00
Boats	£ 2,500.00	£ 5,000.00							£ 7,500.00
FPSP	£ 1,000.00	£ 5,000.00	£ 9,600.00		£ 6,000.00	£ 5,883.61	£ 3,000.00		£30,483.61
London Heathside						£ 6,365.29			£ 6,365.29
Finsbury Park Tennis							£ 3,000.00		£ 3,000.00
Acess to Sport							£ 2,900.00		£ 2,900.00
	£35,000.00	**£50,200.00**	**£48,000.00**	**£ -**	**£14,000.00**	**£34,407.00**	**£38,638.00**	**£38,193.00**	**£258,438**

2024 EIF

A total of £38,193 is available for groups to bid for. Groups have submitted their bids which are due to be determined by the Cabinet Member and announced in January 2025.

Action: *Announce funding decision in January 2025*

5.3 Greening Events

Greening park events is a key objective. The council produced 'Go Green' guide - PowerPoint Presentation (apply4.com) – offers practical tips and advice for all event organisers on how to provide more sustainable events.

We accept that the bigger event, the more chance there is of environmental pollution through increased vehicle movement, larger numbers consuming more, and the infrastructure involved with putting on events.

A significant improvement currently being investigated is to install a mains power supply into Finsbury Park which would provide a source for event organisers to plug into, therefore reducing the need for temporary generators. Although many of the generators now used are run on biofuels, which emit far less pollutants than the older styles ones, they are still vital to the running of events, so by reducing the need for these is a massive step towards even greener events.

Officers will continue discussions with Festival Republic regarding this with the aim to have it in place for the 2025 event season.

Action: Officers to continue to explore the installation of mains electricity into the park for event organisers

2023 Identified Improvements and Actions Update

Report Area	2023 Report Page	Action	Dec 2024 Update
Stakeholder Engagement / Finsbury Park Events Stakeholder Group	3	To review Terms of Reference and membership of Stakeholder Group To agree 2024 calendar of meetings, and topics for discussion	Agreed and approved in March 2024 As set out within the new ToR, however pre-election period meant that April's meeting did not take place. These dates go up until January 2025, when a new calendar of dates will be set.
Stakeholder Engagement / LBH Member Engagement	3	Agree calendar of meetings and topics	Complete. Quarterly meetings set, and Chaired by Cabinet Member
Stakeholder Engagement / Festival Republic & Krank	4	FR and Krankbrother to agree calendar of resident engagement for 2024 FR and Krankbrother to produce Terms of Reference for meetings FR to engage LBH ward members and in partnership, arrange pre-event resident engagement meetings where required FR to invite Haringey resident representatives to event day meetings	Complete. FR hosted a number of engagement meetings with Islington and Hackney reps, and also attended the May FP Events Stakeholder Meeting. Krank residents' meeting held in July. This will be further investigated for the 2025 season. This was hampered due to the pre-election period, however Haringey members and residents were invited to attend the event day meetings to provide feedback. Complete
2023 Events / Tough Mudder	6	Update general terms and conditions to further protect the council in the event of extreme weather	Complete
2023 Events / Haringey Community Events / Finsbury Fest	9	To facilitate the return of Finsbury Fest for 2024	Complete.
2023 Events / Haringey	9	To facilitate the return of the tri-borough music event in 2024	Complete.

Community Events / School's Summer Music Concert			
Key Issues for Improvement / Vibrations	10	Further study into vibration to be commissioned by Festival Republic in 2024, with the Council to request that Festival Republic publish the full report Council officers to offer visits to those experiencing vibrations during the events	FR commissioned a further vibration assessment during the 2024 events, which simultaneously monitored vibration experienced in pre-identified properties in the near vicinity and front of house to determine cause and effect. Information will be shared with the group as it's received. Vibration complaints were greatly down for 2024, however the offer of council attendance was there if complainant was unhappy for hirer's sound consultant to attend.
Key Issues for Improvement / Side Street Security	10	Festival Republic to review deployment of security in side streets on multi-event weekend, and place security personnel at key 'hotspot' locations.	Side security for muti-event weekends was improved, and based on Wireless weekend, although resourcing was reduced. Barrier system was implemented in good time.
Key Issues for Improvement / Ecology and Tree Protection	12	Implement any recommendations arising from the Biodiversity Management Plan, specifically around events Agree and implement an annual maintenance plan focused on improving tree and grass health Officers to continue to physically demarcate tree drip lines to avoid infrastructure being placed on top Officers to work with Krank Events to redesign event area	The Biodiversity Management Plan is still being co-produced with local stakeholders, however further guidance and monitoring was provided by officers within the council including the Tree and Nature Conservation Team. This has been developed and implemented, including works carried out to priority trees within the event sites, year-round. Both hirers demarcated no-go zones around trees within sites, using ped barriers, and hazard tape. Officers inspected sites throughout build, break and events. Site layout of Krank Events much improved. The increased area provided more space for internal trackwayed routes to be

			provided, and ensuring more space within front of house, taking pressure off higher footfall areas.
Key Issues for Improvement / Air Quality	12	Following 2024 events, analyse figures and develop action plan if needed	Initial data received, and work will continue into 2025 to monitor and set improvement plans
Income and Improvements / 2023 EIF	16	Dec '23 open application window with decisions made in Jan '24	Complete. All successful groups received funding in March '23.
Income and Improvements / Greening Events	16	Officers to continue to explore the installation of mains electricity into the park for event organisers	Ongoing, with implementation anticipated for 2025.

Festival Republic 2024 in Finsbury Park

Complaints Breakdown

Build:	26 June - 4 July
Wolf Tones, Michael Bibi & Hozier:	5, 6, 7 July
Rest week inc Finsbury Fest and Haringey Schools Concert:	8 - 12 July
Wireless Festival:	12, 13, 14 July
Break:	15 - 19 July

1.0 Overview of complaints

Table 1.0 and Table 2.0 featured below show a breakdown of calls and emails respectively received to the resident's hotline log that was provided by Festival Republic for the duration of their residency in Finsbury Park. The hotline allows members of the public to contact them to report any issues, concerns, complaints, or general enquiries, and which can then be responded to in real time. The tables summarise the nature of the calls and when they were logged e.g. show days or build/break/dark week.

	Build		Wolftones		Michael Bibi		Hozier		Dark Week		12th July Wireless		13th July Wireless		14th July Wireless		Break		TOTALS 2024		
Calls	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	TOTAL Enquries	TOTAL Complaints	TOTAL All
Accessibility	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1	2	3
Box Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crime Report	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Drug Dealing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drug Use (added 2024)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
Festival Goer Behaviour	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	6	6
General Enquiry - non resident/ticket holder	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
General Complaint - Resident	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
General Complaint - Ticket Holder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Enquiry - Resident	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	4	2	6
General Enquiry - Ticket Holder	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	5	0	5
Graffiti (Added 2024)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helicopter Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Substances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lost Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loitering	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2
Megaphone Noise (Adedd 2024)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Offensive Lyrics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Site Noise	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	2
Off-Site Waste	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
On-Site Construction Noise	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
On-Site Music Noise	0	0	0	3	0	3	1	1	0	0	0	4	0	0	0	3	0	0	1	14	15
Park Access	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking	0	1	1	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	5	1	6
Phone Signal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Posititve Feedback	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residents Letters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Resident Tickets	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
Road Closures	0	0	1	0	0	1	2	0	0	0	1	0	1	1	2	3	0	0	7	5	12
Safety in the Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schools Concert Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Security	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	2
Sustainability	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Traders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tresspass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urination	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	1	0	0	0	6	6
Vibrations	0	0	0	0	0	4	0	0	0	0	0	5	0	1	0	0	0	0	0	10	10
TOTAL	**0**	**3**	**4**	**4**	**3**	**13**	**8**	**4**	**0**	**0**	**4**	**15**	**4**	**11**	**4**	**9**	**0**	**0**	**27**	**59**	**86**

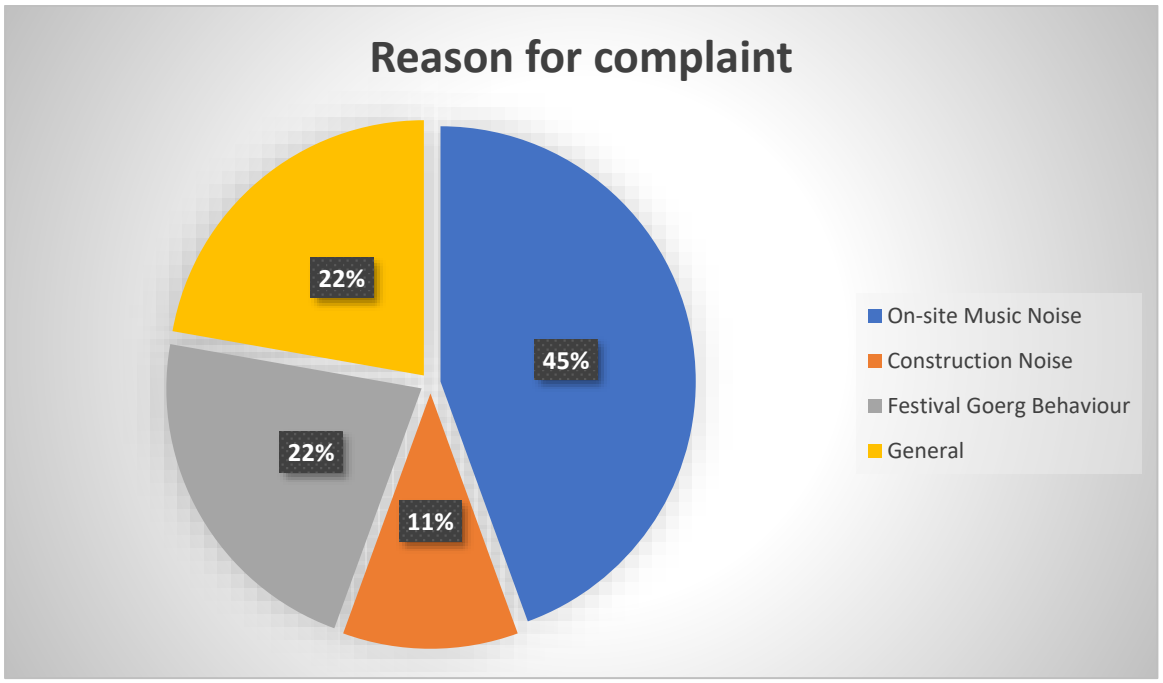
	Build		Wolftones		Michael Bibi		Hozier		Dark Week		12th July Wireless		13th July Wireless		14th July Wireless		Break		TOTALS 2024		
Emails	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	Enquiry	Complaint	TOTAL Enquries	TOTAL Complaints	TOTAL All
Accessibility	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	4	4	8
Box Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Crime Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drug Dealing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drug Use (added 2024)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Festival Goer Behaviour	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	5	5
General Enquiry - non resident/ticket holder	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
General Complaint - Resident	3	4	0	1	0	1	0	2	0	4	0	1	0	0	0	2	0	4	3	19	22
General Complaint - Ticket Holder	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	3	4
General Enquiry - Resident	5	0	0	0	0	0	4	0	1	0	2	1	0	0	1	0	1	0	14	1	15
General Enquiry - Ticket Holder	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	6	0	6
Graffiti (Added 2024)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Helicopter Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Substances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lost Property	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	2
Loitering	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaphone Noise (added 2024)	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	3	3
Offensive Lyrics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Site Noise	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Off-Site Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
On-Site Construction Noise	1	11	0	1	0	1	0	0	0	5	0	0	0	0	0	0	0	4	1	22	23
On-Site Music Noise	0	1	0	1	0	4	0	1	0	0	0	2	0	0	1	0	0	1	1	10	11
Park Access	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
Parking	2	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	4	1	5
Phone Signal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Posititve Feedback	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
Residents Letters	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5
Resident Tickets	2	0	0	0	0	0	1	0	8	0	1	0	1	0	0	0	0	0	13	0	13
Road Closures	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2
Safety in the Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schools Concert Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Security	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Sustainability	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Taxis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Traders	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tresspass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urination	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2
Vibrations	0	0	0	0	0	1	0	0	0	0	0	2	1	4	0	1	0	0	1	8	9
TOTAL	**28**	**21**	**0**	**5**	**2**	**8**	**6**	**6**	**14**	**12**	**3**	**7**	**3**	**13**	**3**	**6**	**2**	**11**	**61**	**89**	**150**

As seen above, throughout the hire period there was a total of **86** calls made and **150** emails sent, with a total of **236** communications logged. **88** of which were general enquiries and **148** logged as complaints. This is a reduction of almost 50% on complaints received in 2023.

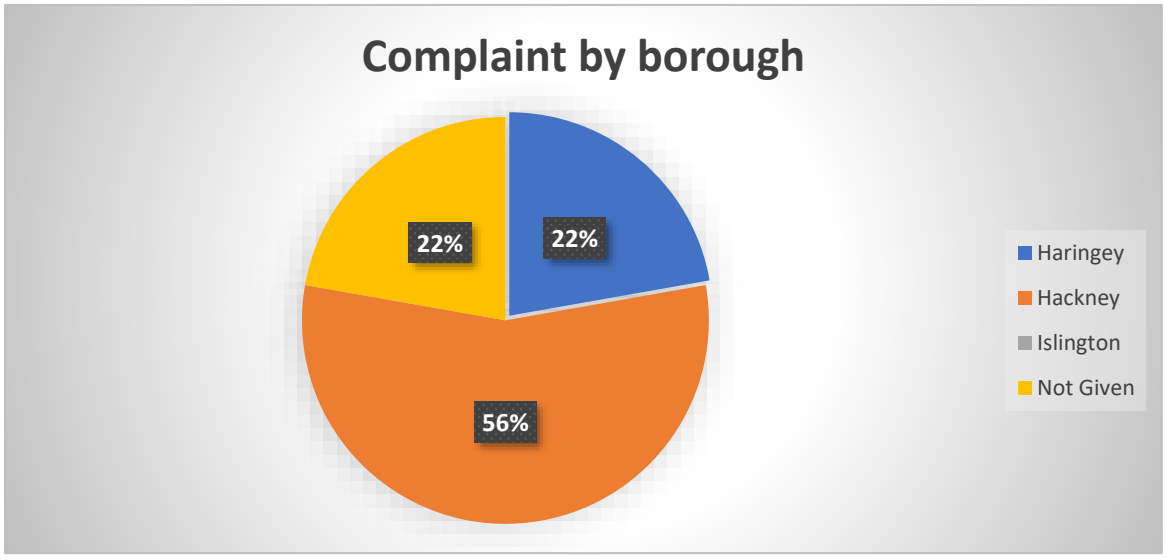
The following breakdown focuses **only** on the **148** complaints made through a combination of emails and phone calls.

2.0 Weekend one: Wolf Tones, Michael Bibi and Hozier

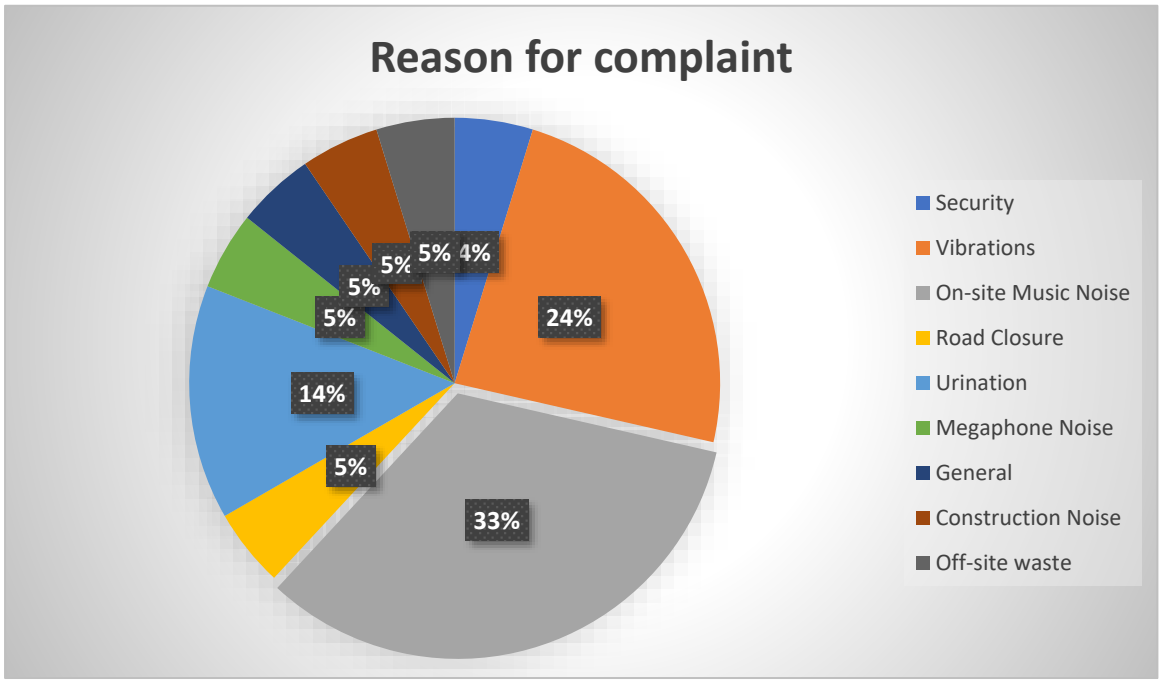
2.1 Wolf Tones - Friday 5 July



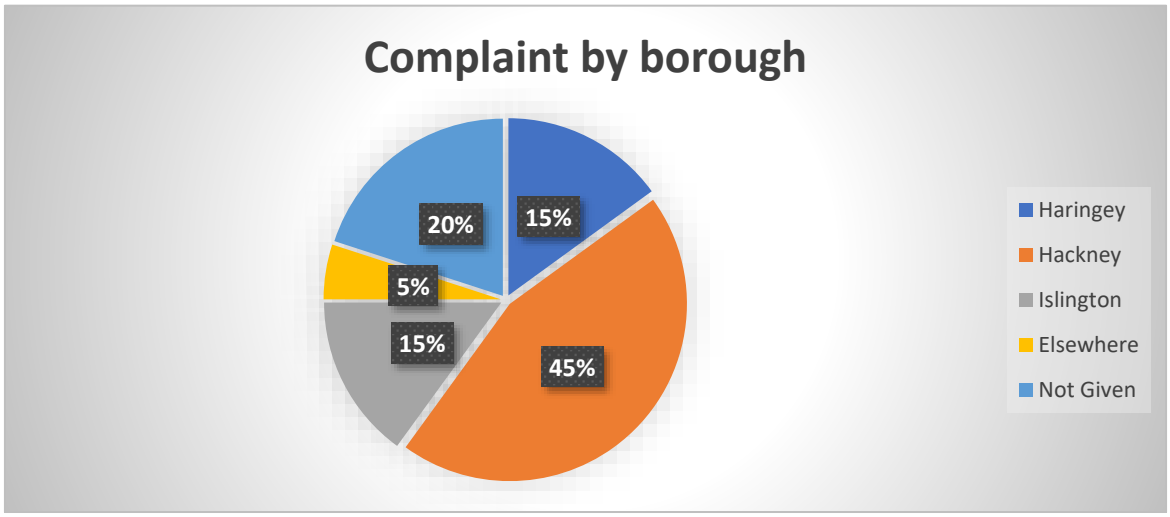
Reason for complaint	Number
On-site Music Noise	4
Construction Noise	1
Festival Goer Behaviour	2
General	2
Total	**9**



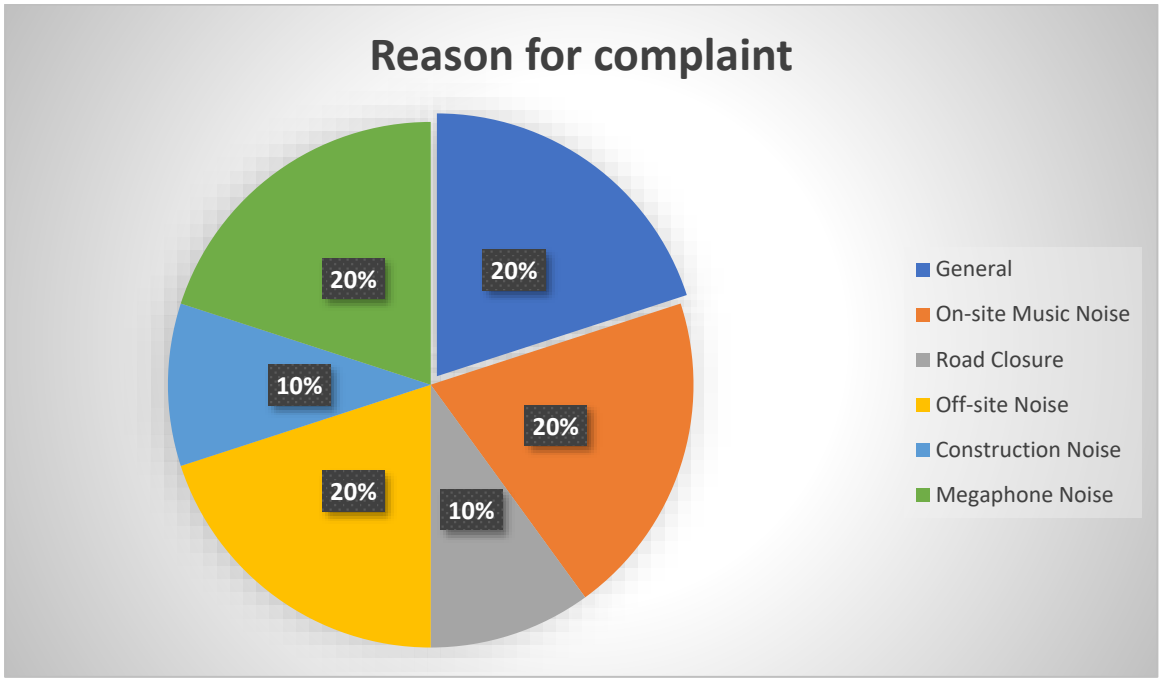
2.2 Michael Bibi - Saturday 6 July



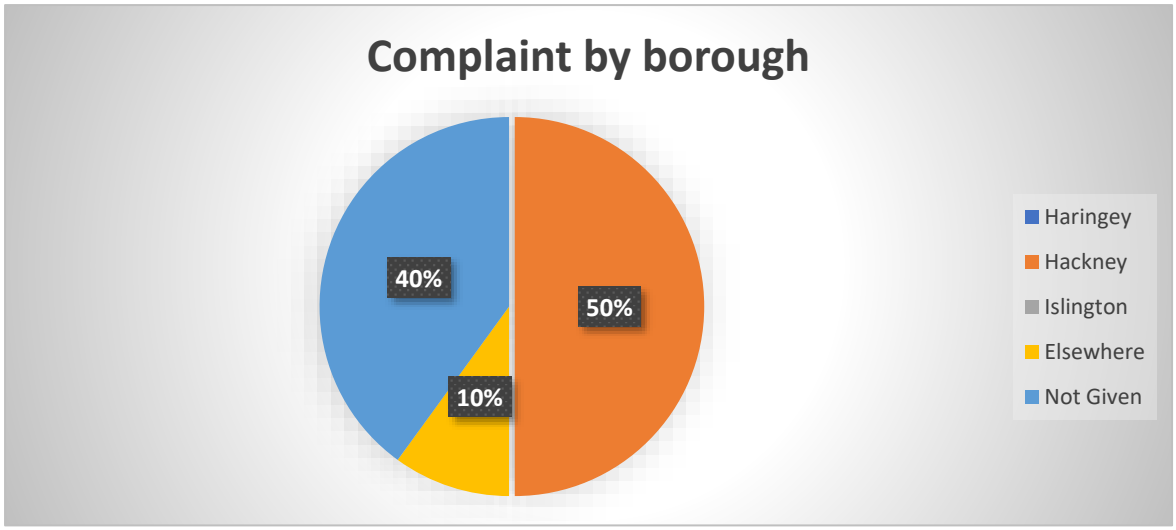
Reason for complaint	Number
Security	1
Vibrations	5
On-site Music Noise	7
Road Closure	1
Urination	3
Megaphone Noise	1
General	1
Construction Noise	1
Off-site waste	1
Total	**21**



2.3 Hozier – Sunday 7 July



Reason for complaint	Number
General	2
On-site Music Noise	2
Road Closure	1
Off-site Noise	2
Construction Noise	1
Megaphone Noise	2
Total	**10**



2.4 Weekend one summary

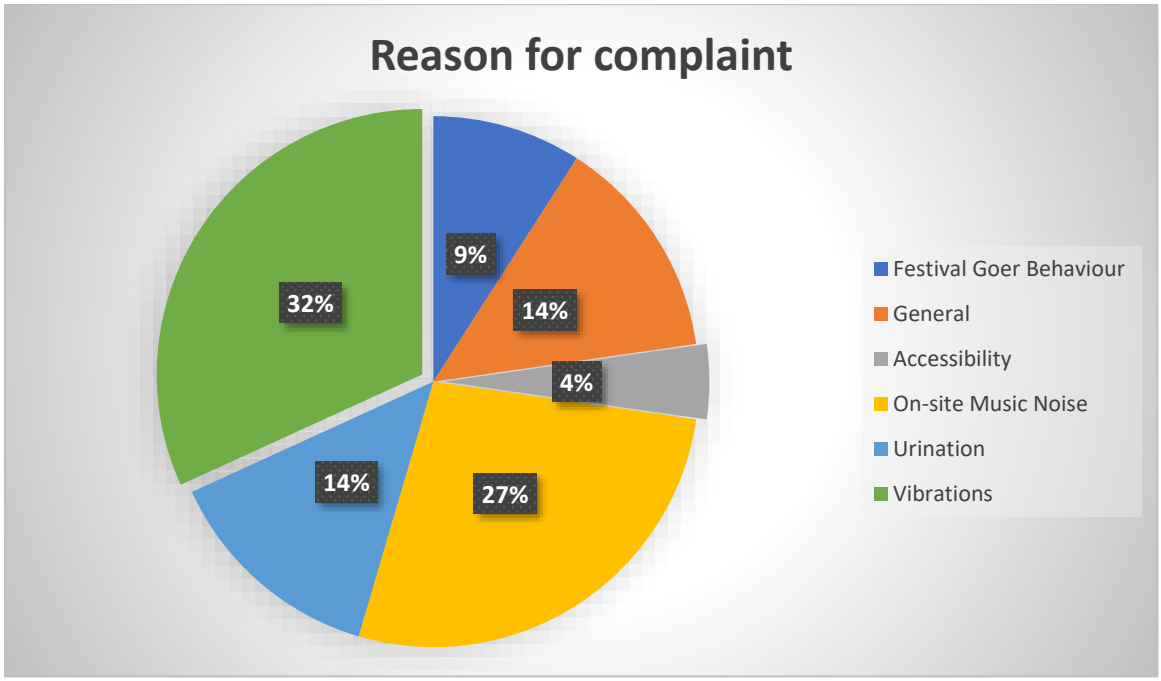
A total of 40 complaints made in 2024 compared to 75 complaints made in 2023 over the first weekend, this shows a sharp decrease in residents contacting the hotline.

During the first weekend in 2024, just over 32% of the complaints made were in relation to on-site music noise which is on par with the percentage of calls in 2023 being made in relation to this however a drop in the number of logs made.

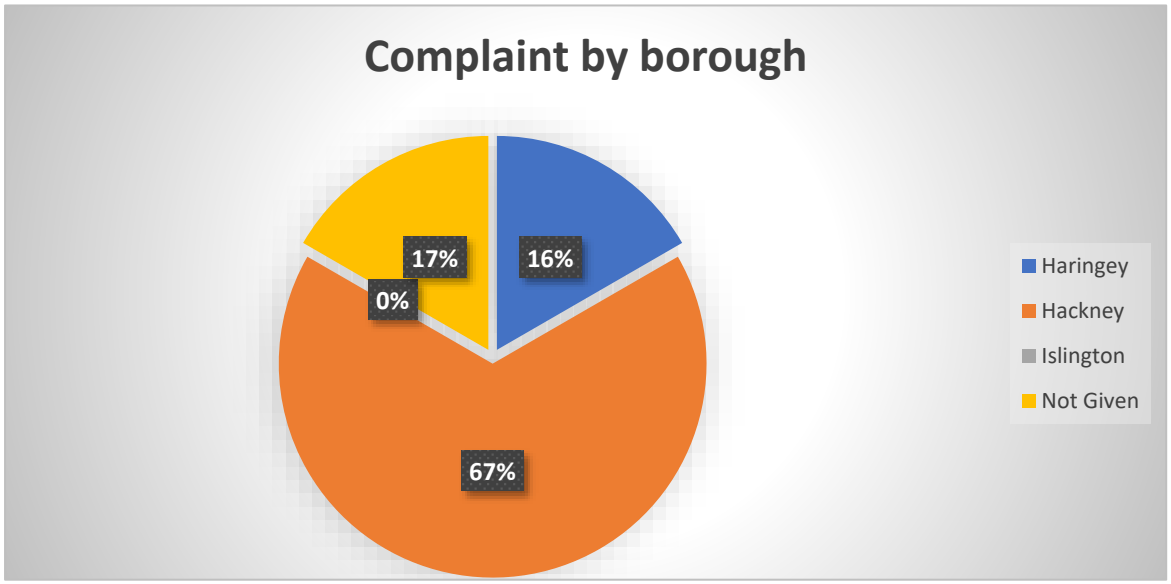
The majority of calls and emails made by residents, who provided a postcode, were located in the N4 area.

3.0 Weekend two: Wireless Festival

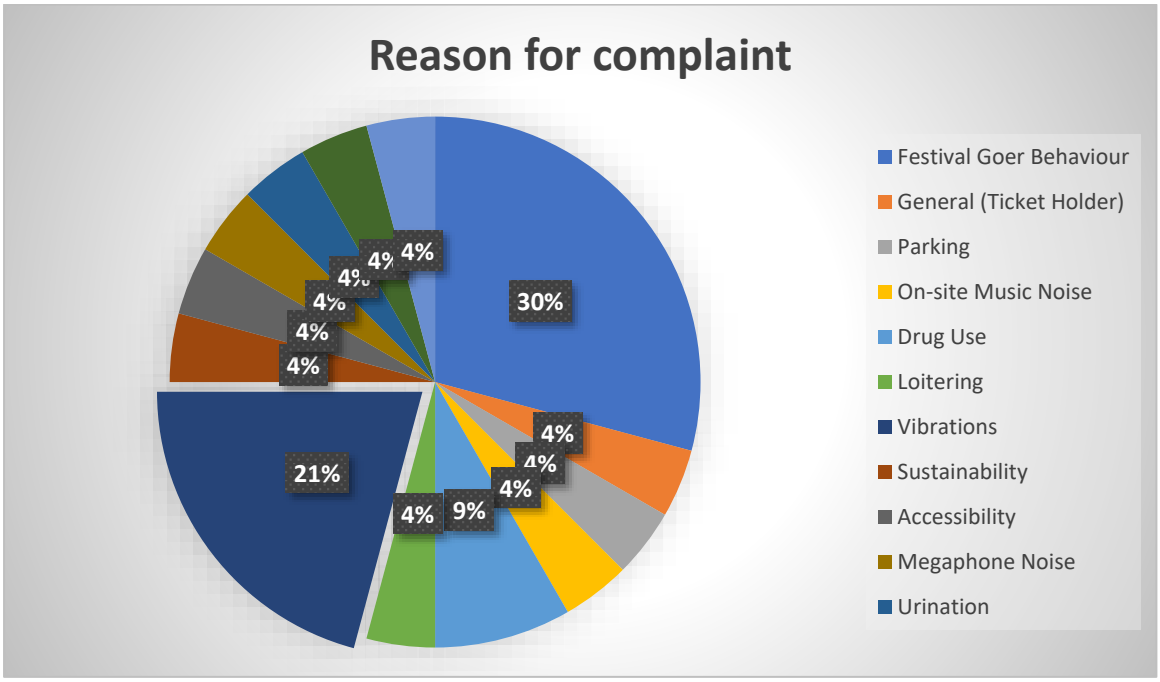
3.1 Wireless day one – Friday 12 July



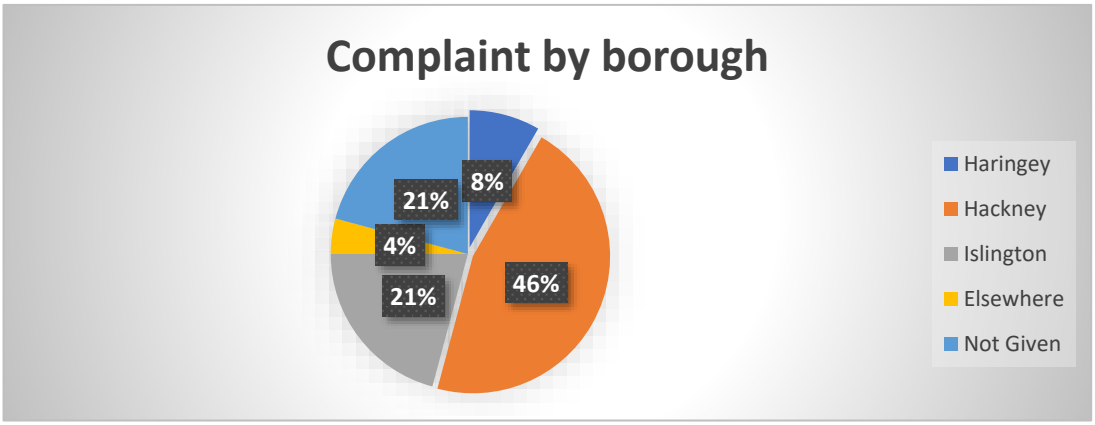
Reason for complaint	Number
Festival Goer Behaviour	2
General	3
Accessibility	1
On-site Music Noise	6
Urination	3
Vibrations	7
Total	**22**



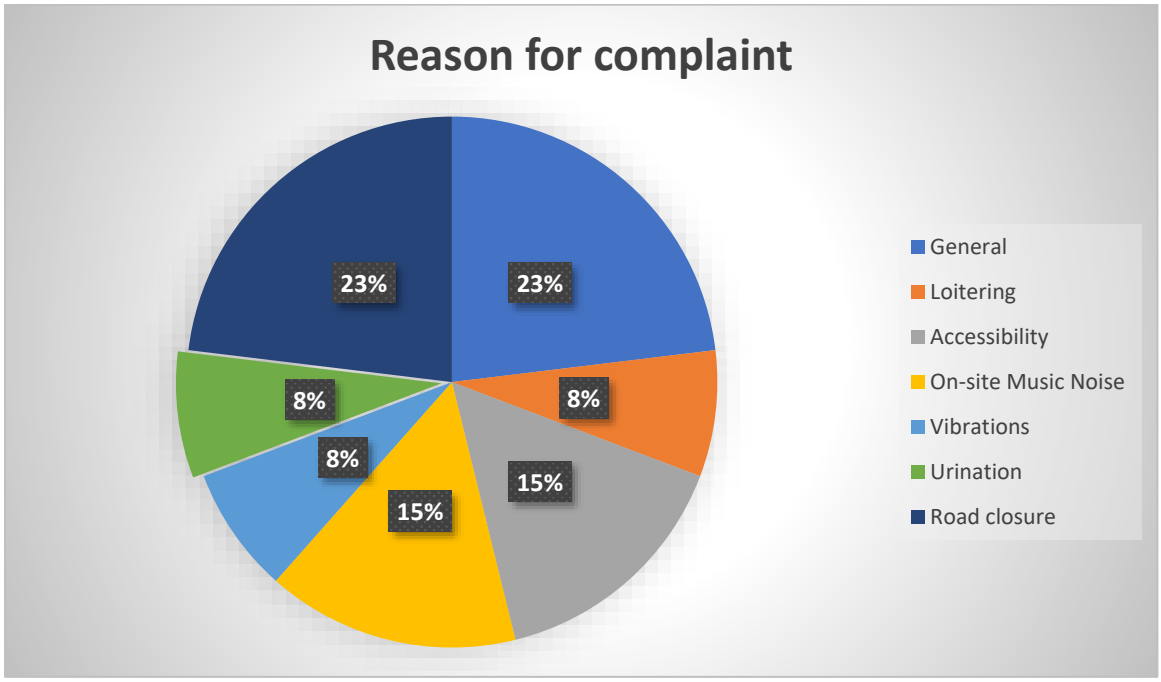
3.2 Wireless day two – Saturday 8 July



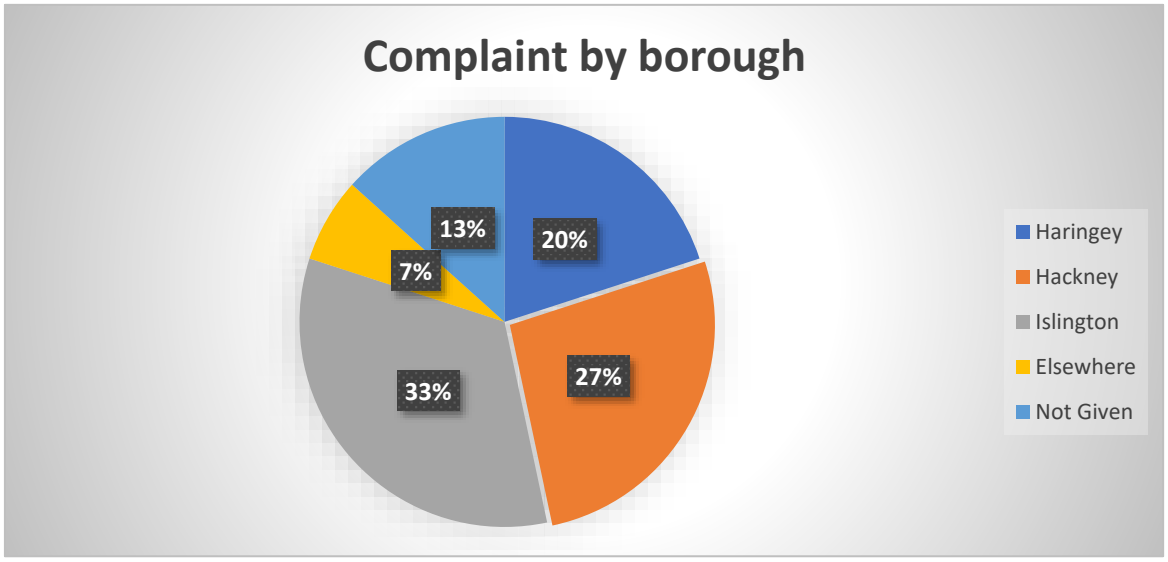
Reason for complaint	Number
Festival Goer Behaviour	7
General (Ticket Holder)	1
Parking	1
On-site Music Noise	1
Drug Use	2
Loitering	1
Vibrations	5
Sustainability	1
Accessibility	1
Megaphone Noise	1
Urination	1
Road Closure	1
Security	1
Total	**24**



3.3 Wireless day three – Sunday 14 July



Reason for complaint	Number
General	2
Loitering	1
Accessibility	2
On-site Music Noise	3
Vibrations	1
Urination	1
Road closure	4
General (Ticket Holder)	1
Total	**15**



3.4 Wireless weekend summary

In 2024, Wireless had 61 complaints logged during event compared to the 222 made in 2023. This shows that 73% drop in complaints in relation to the festival compared to the previous year.

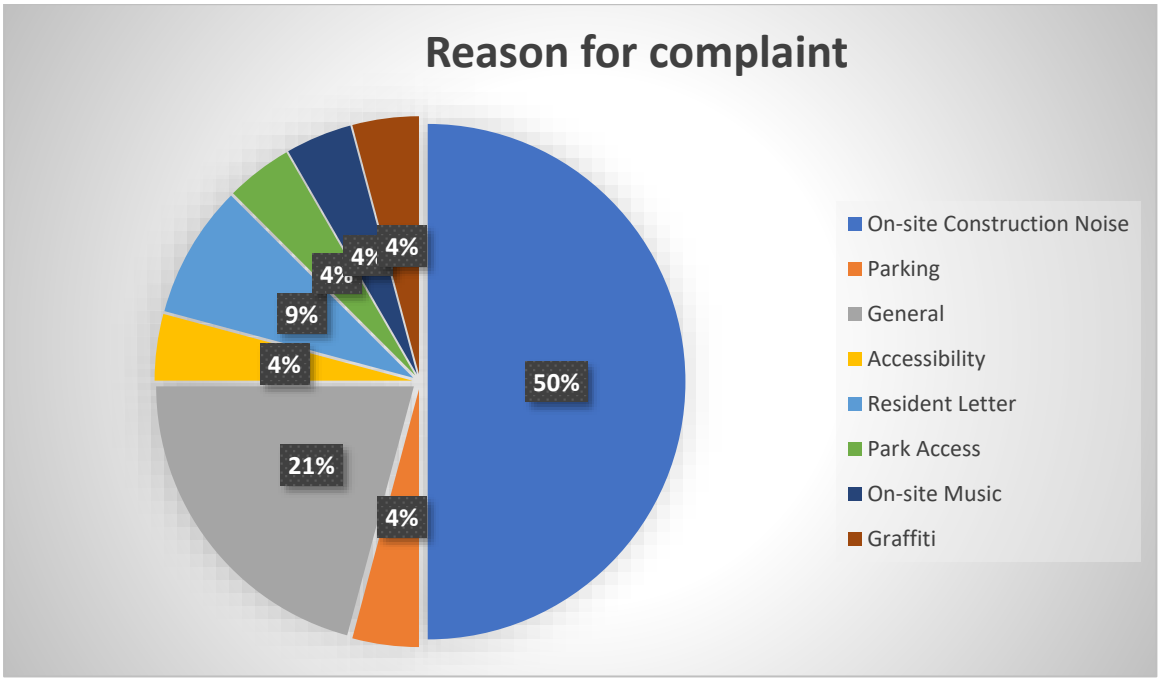
The biggest reasoning for this is due to the sharp reduction in complaints regarding vibrations from the festival effecting the surrounding residential buildings. In 2023, 49.99% of the 222 complaints that were logged during the Wireless weekend were logged as vibration complaints. In comparison, in 2024 only 13 complaints were made in relation to vibrations which made up 22% of the complaints made.

15% of complaints were in relation in the music levels compared to 25.23% in 2023, showing another decrease.

Overall, complaints were down this year across the board which has been a trend year on year.

4.0 Build and rest period

4.1 Build period – 26 June to 4 July



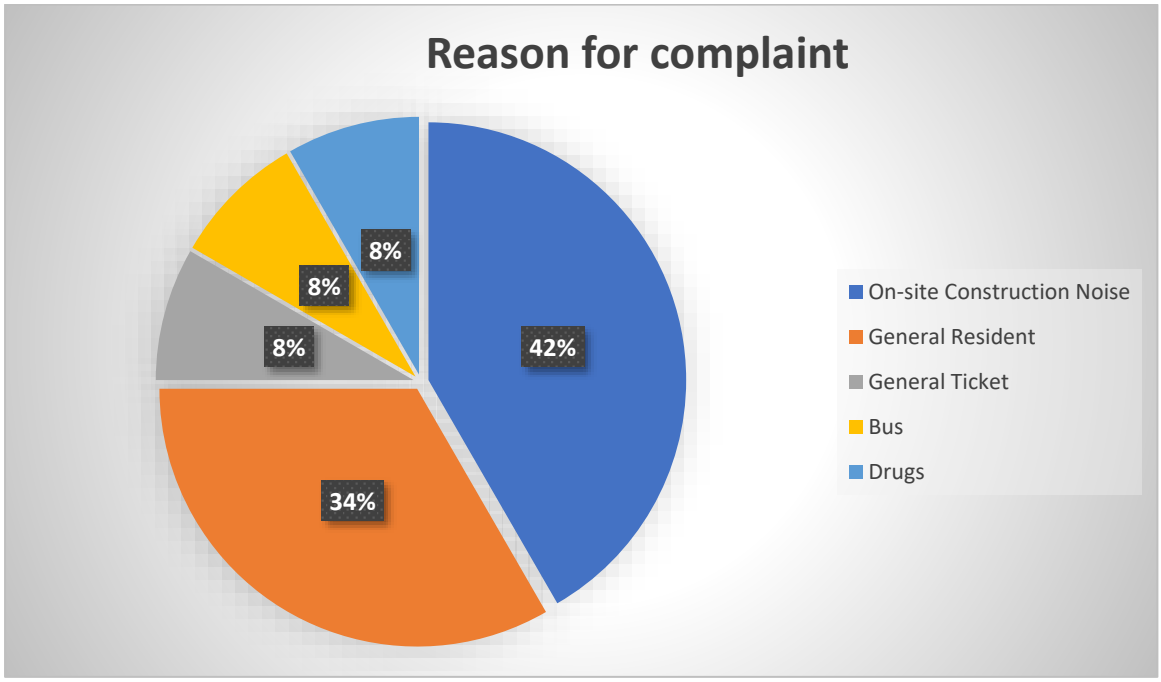
Reason for complaint	Number
On-site Construction Noise	12
Parking	1
General	5
Accessibility	1
Resident Letter	2
Park Access	1
On-site Music	1
Graffiti	1
Total	**24**

4.2 Build week summary

The table and chart above details the calls and emails logged throughout the build of the event site which 24 complaints made which is an increase from 2023 where 7 complaints were made. The majority of these complaints were made due to the on-site construction noise.

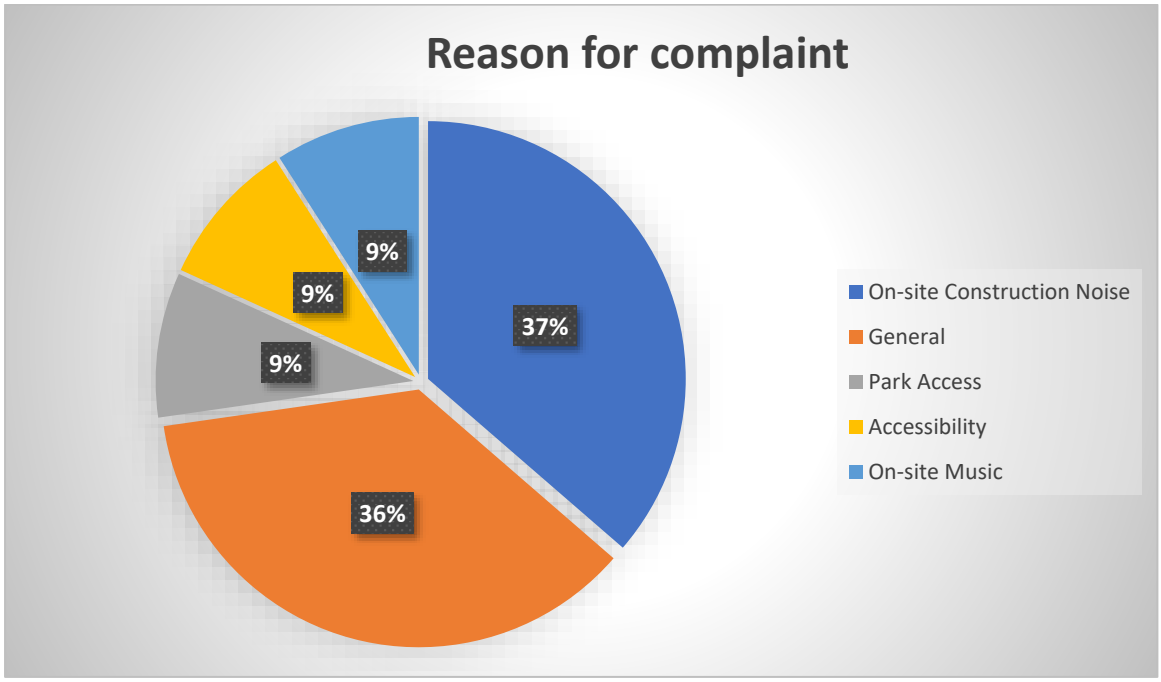
It is important to note that of 9 complaints made in relation to the noise of the construction were made from the same resident.

4.3 Rest week and Community events – 8 July until 12 July



Reason for complaint	Number
On-site Construction Noise	5
General Resident	4
General Ticket	1
Bus	1
Drugs	1
Total	**12**

4.4 De-rig period – 15 to 19 July



Reason for complaint	Number
On-site Construction Noise	4
General	4
Park Access	1
Accessibility	1
On-site Music	1
Total	**11**

4.2 De-rig week summary

The table and chart above details the calls and emails logged throughout the derig of the event site which 11 complaints were made, the majority of these complaints were made due to the on-site construction noise and general issues.

It is important to note that of 3 of the residents were the same residents who were logging complaints during the build of the event.

5.0 Council Received Complaints

In total, the Council directly received 20 complaints regarding the major events in 2024, which is a sharp decrease compared to the 69 received in 2023.

The majority of complaints received this year were around the general event management of events in Finsbury Park and the decisions around hiring the park out to promotors.

2024 Krankbrother Complaints

Event Day Complaints

Below is an overview of complaints received on event days by the organiser, via the resident line or to the council via the noise team or social media, of which all were passed onto the resident line operators to respond to. A comparison is also provided with the 2023 complaints.

At a glance

	Friday 2 August	**Saturday 3 August**	**Sunday 4 August**		**Saturday 10 August**	**Sunday 11 August**
Timings	*16:30 – 22:00*	*13:00 – 22:00*	*13:00 – 21:30*		*13:00 – 22:00*	*13:00 – 21:30*
Event	*Bicep*	*Solomun*	*Anjunadeep*		*Four-Tet*	*Keinemusik*
Attendance	*9,999*	*9,999*	*9,999*		*9,999*	*9,999*
2024 complaints, compared to 2023						
2024 total complaints	38	35	6		7	5
Complaints received via residents' line	23	18	5		6	5
Complaints received via council (noise team / social media)	15	17	1		1	0
2023 total complaints	5	27	17		9	4
Noise complaints only						
2024	38	34	6		7	5
2023	5	25	15		8	4

In comparison to 2023, the number of complaints were higher than over the comparative 5 days of events - 91 received in 2024 compared to 62 received in 2023.

However, this could be down to the fact that complaints made directly to the council's noise team, or received via social media were being forwarded, logged and responded to by the Krank residents' line, which hadn't happened in previous years.

All complaints made with the exception of one, were regarding the noise. In 2023 a few complaints were made regarding the use of the park, and ecology, but none of this type of complaint were received over the 2024 event days.

Timings of complaints

The table below shows a breakdown of time periods complaints were received by the residents' line. These do not show the council received complaints as these were not logged in real time.

	Before 11am	11:00-12:00	12:00 - 13:00	13:00-14:00	14:00 - 15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-00:00
Friday 2 August			1			1	2	3	3	2	3	5	2	1
Saturday 3 August				2	1	1				2	6	5	1	
Sunday 4 August								1	1		2	1		
Saturday 10 August							1				2	3		
Sunday 11 August						1		3			1			
	Event running times													

As with 2023, the majority of complaints were received between 8 and 10pm.

Four calls were made complaining of noise, after the events had finished, and two were received complaining of the sound checks taking place before the event had started.

Council Received Complaints

In addition to the above, the council also received seven complaints following the events. Four were from those who had already complained to the residents' line, forwarded by Members, two were from residents complaining of excessive noise, and one was complaining of urination in the park by festival goers.

Noise Monitoring

Vanguardia was commissioned by Krankbrother to independently monitor and provide feedback for the management of noise and investigate noise complaints over the two weekends of events.

The aim of the noise monitoring plan is to ensure that noise levels at the nearest noise sensitive receptors beyond the park boundary do not exceed specified values and to investigate complaints that may come from further afield.

Key points made within their end of project report include:

- Noise impacts were greatest to the east and southeast of the park i.e. locations on axis to the main stage, and where the westerly to south-westerly winds were influencing the spread of noise.
- Noise levels at locations stipulated within the premises licence confirmed that the music noise levels were within the required limits.
- Noise levels were greatest at the Rowley Gardens location east of Green Lanes as this is nearest to the event site.
- Music noise monitored levels at all other locations, including the vicinity of complaints, were lower than at Rowley Gardens; and were therefore below, in most cases by wide margin.
- Several complainants volunteered as part of the conversation that they had been prompted to complain by postings on resident Facebook, WhatsApp groups and other social media.
- Although complaint numbers varied on each day with a general trend for rapid drop in numbers after the first and second day, there were no significant differences in the noise levels measured on site and at the licence monitoring locations between each of the five event days.
- Low frequency content of music, i.e. bass noise, was the most common issue raised by complainants.

- Several complainants expressed the view that noise levels were higher at the top floors of tower blocks than at ground level i.e. Woodberry Down estate. These tower blocks are between around twice to about give times further away as the monitoring locations set within the licence, consequently the levels will be substantially lower at the tower blocks compared to the licenced locations closer to the event.

VANGUARDIA

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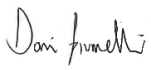
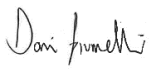
Project Note

Project	Krankbrother Events Finsbury Park 2nd, 3rd &4th and 10th & 11th August 2024
Subject	Noise
Project no	0062393-0000-0
Date	29 August 2024

Revision	Description	Issued by	Date	Approved
0	Draft for comment	RD	28/08/2024	
01	Final Version	RD	29/08/2024	

1.1 Introduction

Vanguardia has been commissioned Krankbrothers (KB) to provide three suitably qualified and experienced staff to independently monitor and provide feedback for the management of noise, and investigate noise complaints for the two weekends of KB music events in Finsbury Park on the 2nd, 3rd, 4th , 10th and 11th of August 2024.

Music events in Finsbury Park are subject to a premises licence issued by LB Haringey under the Licensing Act 2003. The licence application is publicised on the council's web site and with notices at entrances to the park. Any person can make representations with no restriction to only those who live in LB Haringey or the immediate vicinity of the park.

The premises licence has specific conditions that require independent noise consultants to be appointed by the event organisers to monitor and manage the noise from the events. This is standard practice and the regulatory approach for almost all events of this nature across the UK.

The premises licence requires that prior to the events taking place a Noise Management Plan (NMP) is submitted to the local authority detailing by whom? when? how? and where? noise is monitored in respect of specified control values at prescribed noise sensitive receptors off site.

The NMPs for events in Finsbury Park follow the principles of good practice established over the last 30 years for music events at parks and similar venues across the UK.

The NMP stipulates limits to Music Noise Levels (MNLs) based on the underlying background noise levels surveyed when no event is taking place, as shown in the table below.

"Bass" music noise is capped by a fixed MNL limit of Leq,15 min 90 dBC, as the C weighted decibel is more sensitive to low frequency noise.

Location	Background Noise Level 19:00-23:00hrs ($L_{A90,1hr}$)	Overall Music Noise Limit ($L_{Aeq,15min}$) dBA
Seven Sisters Road, N4	63 dB(A)	**75 dB(A) (capped)**
Adolphus Road, N4	51 dB(A)	**66 dB(A)**
Woodstock Road, N4*	47 dB(A)	**62 dB(A)**
Stapleton Hall Road, N4	41 dB(A)	**56 dB(A)**
Lothair Road South, N4	46 dB(A)	**61 dB(A)**
Rowley Gardens, N4	49 dB(A)	**64 dB(A)**

Table 1: Background noise levels and resulting MNLs for the premises licence.

Because it is impossible to monitor noise everywhere simultaneously, and in line with the concept of Public Nuisance from the Licensing Act 2003, the NMP establishes representative monitoring locations at noise sensitive receptors around the perimeter and in the vicinity of the park as shown in the figure below.

Figure 1: Noise Monitoring Locations from the NMP and the location and orientation of Festival Republic (FR) and Krankbrother (KB) Events

The above noise monitoring locations are selected as they are where noise from events in the park tends to be loudest. Noise levels from events at locations further from the park than those shown above are lower because of the longer distance it has travel and screening by topography and urban build up.

During the Krankbrother events noise levels were measured at the locations shown above on a regular basis. These were correlated back to the noise levels being continuously measured at the front of house mixing desks to establish maximum control values which would prevent the music noise levels in the NMP being exceeded at the noise sensitive locations shown above.

During the KB event it soon became clear that the noise impacts were greatest to the east and southeast of the park i.e. locations on axis to the main stage, and where the westerly to south-westerly winds were influencing the spread of noise. Consequently, monitoring off site focussed on these critical control locations i.e. keeping to the requirements of the NMP at these locations automatically meant that levels elsewhere were lower.

By way of comparison the figure above shows the approximate location and orientation of the Festival Republic (FR) events and the KB events. The FR events are in the southwest of the park and the main stage faces northeast. Whereas the KB events are in the northeast of the park and the stage faces southeast. The difference in the location and orientation of the FR compared to KB events means that the spread of noise is different. For example, the FR events are heard more towards the west and north of the park, with some noise audible to the east and south. Whilst the KB events are heard more towards the east and south of the park with some noise audible to the north.

The aim of the NMP is to ensure that noise levels at the nearest noise sensitive receptors beyond the park boundary do not exceed specified values and to investigate complaints that may come from further afield.

Levels of noise from the KB events at distances further from the park than the nearest noise sensitive receptors represented by the monitoring locations in the NMP, were substantially lower as the distance the sound travels and screening by topography and intervening urban build up is greater than for the monitoring locations in the NMP, which are closer to the event.

1.2 Noise Monitoring

Regular monitoring at the locations stipulated in the premises licence confirmed that Music Noise Levels were within the required limits. Noise levels were greatest at the Rowley Gardens location east of Green Lanes as this is nearest to the event site. Monitoring of MNLs levels at all other locations, including in the vicinity of complaints, were lower than at Rowley Gardens; and were therefore below, in most cases by wide margin, the NMP limits.

1.3 Complaints

Investigation of all complaints received by the event revealed levels were moderately to substantially below the values for the nearest licence noise monitoring location in the NMP.

A substantial majority of complaints came from the south and east of the Seven Sisters Rd junction with Green Lanes. This is not unexpected as the main stage for the event was facing this direction. However, the separation distance to these complaints was from approximately twice to around 16 times that from the event to the nearest noise monitoring location stipulated by the licence. This means that based on distance alone the noise would be moderately to substantially lower than at the nearest noise monitoring location stated on the licence. Additional attenuation by screening due to topography and urban build up would have further mitigated the impact.

Details of the numbers of complaints received by the event hot line for each event day are given below.

1.3.1 Friday 2nd August

24 complaints were received by the event hot line during the show.

1.3.2 Saturday 3rd August

18 complaints were received by the event hot line during the show.

1.3.3 Sunday 4th August

3 complaints were received by the event hot line during the show.

1.3.4 Saturday 10th August

6 complaints were received by the event hot line during the show.

1.3.5 Sunday 11th August

5 complaints were received by the event hot line during the show.

1.3.6 Impact of Social Media and Networks

Several complainants volunteered as part of the conversation that they had been prompted to complain by postings on resident's Facebook, WhatsApp groups and other social media. This is considered to have influenced the number and distribution of complaints, although it is not possible to precisely quantify to what extent.

1.3.7 Positive Comment

Whilst monitoring noise and investigating complaints at multiple locations several members of the public enquired what the noise team were doing and in response to being told, said that they lived locally, that the noise was not unacceptable and that they appreciated that the revenue raised from the events contributed to the upkeep and improvement of the park or reacted positively when told this.

1.4 Discussion

Although complaint numbers varied on each day with a general trend for rapid drop in numbers after the first and second event day. There were no significant differences in the noise levels measured on site and at the licence monitoring locations between each of the five event days.

1.4.1.1 Bass Noise

The low frequency content of music i.e. bass noise, was the most common issue raised by complainants. This is usually due to factors including:

- The music contained significant low frequency bass content.
- Low frequency noise travels more efficiently than mid to high frequency sounds.
- Low frequency noise penetrates into buildings more readily than mid to high frequency sounds.

Low frequency bass sound has been a critical component of popular music since at least the early days of Jazz around the start of the 20th Century. Low frequency sound in modern popular music is normally associated with the repeated beats and rhythms of drums and bass guitars and the synthesized sounds from electronic instruments and other sources.

The low frequency bass content is necessary for effective entertainment because, for example, it contributes to the sensation of loudness and provides the intangible, but vital impetus to dance/move rhythmically i.e. the "groove".

However, excessive low frequency "bass thump" beyond the venue can provoke adverse community responses.

Consequently, the NMP includes a C-weighted limit to provide a cap on bass noise, as the C-weighted decibel is more sensitive to low frequency sound. However, the low frequency content of music cannot be eliminated without unduly compromising the purpose of licensing and holding the event.

1.4.1.2 Noise Levels Greater at the Higher Floors of Tower Blocks

Several complainants expressed the view that MNLs were higher at the top floors of tower blocks than at ground level e.g. Woodberry Down estate.

The licence sets external limits at fixed noise sensitive locations immediately adjacent to the park, which are accessible to the noise team. These locations are representative of public nuisance in the wider area, rather than just impacts at the specific location.

The noise team do not go into people's homes to assess compliance as the noise limits are set externally. This is established good practice for similar events in the UK.

The noise levels at the licence monitoring locations are highest as they are closest to the event i.e. they are worst case. The tower blocks are between around twice to about five times further away as the monitoring locations on the licence. Consequently, the levels will be substantially lower at the tower blocks compared to the licence locations closer to the event.

As a result, even if levels are higher towards the top of the tower blocks than at ground level, they will still be lower than at the licence monitoring locations closer to the event which act as critical control points i.e. keeping below the licence limits at the licence monitoring locations means the levels further away will automatically be lower.

1.4.1.3 Complaints

Regarding complaints, it should be noted that Defra sponsored research into attitudes to environmental noise from concerts[1] reports that:

- *"Whilst 9% of all respondents were fairly or very annoyed by the music noise, it should be noted that only 1% of residents actually complained about the noise disturbance.*

- *"The most common reasons for not making a complaint were that they "had nothing to complain about" (53%) or "event did not have sufficient impact to complain "(33%). This finding is similar to many other areas of impact where simply being annoyed does not necessarily trigger a complaint."*

[1] Research into attitudes to environmental noise from concerts, DEFRA report NANR 292 Final 2011

- *"It also appears that a significant percentage of the population will form an opinion on the music's subjective annoyance irrespective of the actual level of music."*

Furthermore:

- There is a weak correlation between physical acoustic measures and the propensity to complain e.g. similar levels of the same music noise provoke wide variation in the numbers of complaints from equally affected but different areas; and complaints are often made at different locations with widely varying music noise levels.

- It is not unusual for more complaints to be made at the lower levels further from the festival than at the higher values closer to the event.

- Perception of sound and attitude to event/artistes/audience appear to be strong triggers for complaint rather than any form of public or statutory nuisance. These are legal concepts with specific meaning and are not simply something that a member of the public finds annoying or displeasing on a subjective basis.

- Complaints regarding noise are often linked to other elements e.g.
  - Perceptions of festival goers and their behaviour.
  - Opinions on festival organisers motivations.
  - Opinions on use of public spaces for events.
  - Perceptions on damage to public spaces and facilities.
  - Access to free/discounted tickets.
  - Traffic management, parking and litter.
  - No or low cultural or social value of the event to the complainant.
  - Dislike of the music played/preference of other music types.
  - Antipathy towards regulatory authorities' and their decision making.
  - Expectation of control over the conditions in a locality.
  - Local adverse publicity and/or campaigns against the events.
  - Social media posts encouraging complaint and/or spreading dis-information.

The above indicates that although complaints may reflect the response of suitably motivated individuals, they are a poor indicator of wider community noise impact, as complaints can be significantly biased by highly variable subjective personal non-acoustic factors, and therefore over-estimate the magnitude of impact.

Urban local authorities typically receive 1000s of noise complaints each year, but normally only a small minority are ever determined to be some form of legal nuisance. This reinforces that there can be a significant gap between what will trigger complaints by some individuals who are not representative of the population as a whole, and what constitutes a legal nuisance which takes into account the typical response of an average person.

A conclusion that the number and distribution of complaints is not a reliable indicator of community impacts is reasonable based on the above and considering that 10,000 mailshots were sent out by Krankbrother to residents around the park and there is a community information website set up for the events. Both communication measures invite residents to contact a complaints telephone or email hot line. Even so, the total number of complaints received is a tiny fraction of those persons canvassed by the event organisers to complain if they wish. Which indicates that the overall noise impacts on the public were not unacceptable.

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Results of vibration monitoring during events held at Finsbury Park in July 2024

Technical Note, 29/11/24
Finsbury Park Concerts [Friday 5th – Sunday 7th July 2024] & Wireless [Friday 12th July – Sunday 14th July 2024]
Leonardo Fernandez, Dani Fiumicelli, Jim Griffiths

Executive summary

This technical note reports the results from the monitoring of ground-borne vibration across two separate festival weekends in Finsbury Park London:

- Finsbury Park Concerts from Friday 5th July 2024 to Sunday 7th July 2024.
- Wireless Festival from Friday 12th July 2024 to Sunday 14th July 2024.

Vanguardia carried out a scientific study during the two weekends of the Wireless 2022 Festival and the Community Festival 2022 which confirmed the presence of vibration with a frequency of around a 2 Hz generated by the crowd jumping in-sync with the music, which caused a corresponding response within some of the nearby mid-rise buildings. A common theme in residents' reporting of previous vibration noted a swaying effect in their homes. Clothes hung in wardrobes swayed on their hangers, framed pictures hung on walls moved and tall pot-plants swayed. These phenomena are consistent with those observable by residents in very tall buildings on particularly windy days. Notwithstanding this, the levels of building sway measured during Wireless 2022 were confirmed to be below building damage thresholds from British and International standards.

No vibration monitoring was undertaken for festivals held in Finsbury Park in 2023 but for 2024 Vanguardia were commissioned by Festival Republic to undertake a second study, this time monitoring in seven different buildings in response to discussions with residents prior to the event and to augment knowledge of the phenomenon beyond the two buildings originally monitored in 2022. Priority was given to the top floors of the mid-rise buildings along Seven Sisters Road adjacent to the park, in response to requests made during discussions with local residents prior to the event. The aim of the monitoring was to compare any circa 2 Hz vibration detected during the 2024 Finsbury Park festivals to that measured in 2022 and to relevant thresholds relating to cosmetic damage to buildings and human perception of vibration. This was undertaken by measuring in the proximity of the crowd and in the homes of local residents who agreed to facilitate the process by allowing the installation of a remote vibration monitor in their home. A system of remote, synchronised, vibration monitoring was put into place. Seven Sigicom C22 tri-axial vibration sensors were deployed. Each was linked to the same online data platform so the signals uploaded would be automatically synchronised to one overall time stamp. This way, patterns of vibration could be compared at multiple locations for the same unique time stamp. Being a remote system means that continuous vibration monitoring could take place in the homes of local residents throughout the event days with minimum intrusion to the lives of the residents themselves. The monitoring locations used were:

- Top floor (Level 10) of Park House
- Top floor (Level 04) of Foxglove Court (Saturday 13th & Sunday 14th July 2024[1])
- Top floor (Level 04) of 384-386 Seven Sisters Road
- Level 03 of Sunflower Court (Friday 12th July 2024 only[1])
- Level 03 of Windsor House
- Level 01 of Chadworth House
- Level 01 of Rowley Gardens
- Under the stage of the Wireless Festival

[1] Monitor was moved from Level 03 Sunflower Court to Level 04 (top floor) of Foxglove Court on Saturday 14th July 2024 following the residents meeting in response to requests from Foxglove Court residents. Both buildings are of the same construction type and height.

The monitoring produced a very large quantity of data. In processing this, attention was focussed on occasions where a characteristic circa 2 Hz swaying-mode horizontal vibration was detected by the monitors placed in the residences. These instances were compared to concurrent vibration measurements captured by the monitor under the stage, allowing for the propagation delays involved in the transmission of vibration through the ground.

Concurrent circa 2 Hz vibration events detected in multiple buildings and at the festival stage are taken to be those that are strongly linked to activity on the festival site because they are not likely to be caused by un-related local events in an individual apartment such as the movement of people, closing doors and so forth that can mask the vibration data of interest. These simultaneous events also contain the periods of highest 2 Hz vibration level detected over the weekend.

No synchronous 2 Hz occurrences were detected during the first weekend of music in 2024 (Finsbury Park Concerts, Friday 5th to Sunday 7th July 2024). This is an unambiguous finding as the stage monitor never detected a 2 Hz vertical jumping wave across three days of music. Inspection of the complaints received from residents during this first weekend appear to relate to noise as opposed to the characteristic 2 Hz building sway which is the subject of this technical note, with 4 of 5 complaints originating from one complainant. The findings of this report, therefore, focus on building sway vibration events detected during the second weekend of music at Finsbury Park, Wireless festival.

The circa 2 Hz vibration events last for several seconds at a time. In order to get a measure of how frequently they occurred, the whole Wireless weekend was divided into 1-minute segments. If a 2 Hz vibration is detected during one of those segments, then that time stamp is noted as an 'event-minute'. No characteristic 2 Hz vibration events were detected during Finsbury Park Concerts, and so the following data analysis focusses on Wireless festival weekend. There were 2,020 minutes of music on the Wireless site over the weekend. During any given event-minute, the duration of the circa 2 Hz vibration would typically last less than 10 seconds and not anywhere near the full minute interval.

At the top floor of 384-386 Seven Sisters Road, within the 2,020 minutes of music played during Wireless, there were 160 individual event-minutes when the circa 2 Hz vibration was recorded, typically being in short bursts of lateral motion at low amplitudes of < 3 mm/s which lasted up to 10 seconds. The characteristic 2 Hz vibration exceeded 3 mm/s for a total of 57 seconds across the weekend, with a single instance where PPV exceeded 5 mm/s, reaching 5.3 mm/s for 5 seconds at 2.5 Hz which corresponds to a dynamic displacement of 0.34 mm.

At the top floor of Foxglove Court, within the 1,760 minutes of music monitored at this location during the Saturday 13th and Sunday 14th at Wireless, there were 87 individual event-minutes when the circa 2 Hz vibration was recorded, typically being in short bursts of lateral motion at low amplitudes of < 3 mm/s which lasted up to 10 seconds. The characteristic 2 Hz vibration exceeded 3 mm/s for a total of 28 seconds across Saturday 13th and Sunday 14th, with a single instance where PPV exceeded 5 mm/s, reaching 5.5 mm/s for 7 seconds at 2.5 Hz which corresponds to a dynamic displacement of 0.35 mm.

The two short intervals of 5 and 7 seconds respectively with a dynamic displacement of circa 0.35 mm remain below the lowest threshold for which there is credible evidence of vibration-induced cosmetic damage to building fabric (typically fine cracking in plasterwork). That threshold is a vibration velocity of 5 mm/s at frequencies at or above 4 Hz and a dynamic displacement of 0.6 mm at frequencies 1-4 Hz. In this case, the relevant threshold is the 0.6 mm displacement because of the frequency involved.

At the top floor of Park House, within the 2,020 minutes of music played during Wireless, there were 101 individual event-minutes of the circa 2 Hz lateral vibration at low levels of < 2 mm/s, typically lasting up to 10 seconds. It exceeded 2 mm/s for a total of 28 seconds across the weekend, but never exceeded 3 mm/s PPV on the floor at 2 Hz, which is equivalent to a dynamic displacement of 0.24 mm.

On Level 03 of Windsor House, within the 2,020 minutes of music played during Wireless, there were 72 individual event-minutes of the circa 2 Hz lateral vibration at low levels of < 1 mm/s, typically lasting up to 10 seconds. It exceeded 2 mm/s for a total of 34 seconds across the weekend, but never exceeded 3.5 mm/s PPV on the floor at 2.6 Hz, which is equivalent to a dynamic displacement of 0.22 mm.

Away from these upper floor apartments, peak vibration velocities (PPV) for the circa 2 Hz horizontal vibration were typically 1 mm/s or less and never exceeded 2 mm/s (Chadworth House and Rowley Gardens).

Residents' observations of a systematic swaying motion of their buildings can be attributed to this circa 2 Hz horizontal vibration with a distinctive time pattern that is also evident in the ground under the Wireless Festival audience. Levels of vibration in the ground, consistent with a group of people jumping at 120+ beats per minute. The levels of ground vibration caused by the crowd are not uncommonly high at < 5.5 mm/s, but the duration (despite being a matter of seconds in duration) is sufficiently long to allow resonance of the local taller buildings to build up (a naturally occurring effect) and this magnifies the vibration at the top of the buildings.

Conclusions

No characteristic 2 Hz vibration was detected during the first weekend music (Finsbury Park Concerts, Friday 5th July to Sunday 7th July), with complaints received from 2 separate complainants referring to disturbing noise as opposed to building sway which is the subject of this technical note. There were 13 building sway complaints received from 12 different residents during the second weekend (Wireless Festival, Friday 12th to Sunday 14th July), 11 of which live in mid-rise buildings along Seven Sisters Road. These complaints were correlated to periods where building sway was occurring at the monitoring locations along Seven Sisters Road during Wireless. A swaying-type mode of vibration is already known and reported by residents living at higher level floors of the taller buildings near the festival site at Finsbury Park. The monitoring reported here explains the origins of that vibration and establishes both the number of occurrences over the Wireless Festival weekend and their amplitude.

The levels of vibration measured are not uncommon in buildings and could arise at other locations from high winds or construction works at a neighbouring property. The unusual features this occasion is the low frequency, which is caused by crowds-jumping in unison to the music and not the music being played by subwoofers themselves, as established during the 2022 study.

The vibration levels are always significantly below published thresholds for cosmetic damage to plasterwork being 0.6 mm dynamic displacement at 2 Hz. The levels are lower than those caused by common events in residences such as slamming doors or dropping heavy items on the floor. The characteristic 2 Hz building sway attributed to crowds-jumping is present within the residences for a small proportion of event-minutes relative to the total number of minutes music is being played across Wireless, with the duration of building sway typically lasting less than 10 seconds and not anywhere near the full minute interval during any given event-minute.

At the top floors of Foxglove Court and 384-386 Seven Sisters Road there was a single vibration event lasting 7 seconds over the Wireless Festival weekend when a characteristic (circa) 2 Hz vibration on the floor was recorded as exceeding 5 mm/s PPV. The instantaneous maximum PPV of 5.5 mm/s PPV at 2.5 Hz corresponds to a dynamic displacement of 0.36 mm, which is below the 0.6 mm threshold for the onset of potential cosmetic damage (typically fine cracking) in plasterwork.

Otherwise, the characteristic 2 Hz vibration level, when it occurred (which was within 160 event-minutes within 2,020 minutes of music played at Wireless at 384-386 Seven Sisters Road and 87 individual minutes within the 1,760 minutes of music monitored at Foxglove Court during Wireless) were typically below 3 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

Within the top floor of Park House, the characteristic 2 Hz vibration level, when it occurred (which was 101 event-minutes within the 2,020 minutes of music played at Wireless) were typically below 2 mm/s PPV and on some limited occasions up to 3 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

On Level 03 of Windsor House, the characteristic 2 Hz vibration level, when it occurred (which was 72 event-minutes over the 2,020 minutes of music played at Wireless), were typically below 2 mm/s PPV and on some limited occasions up to 3.5 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

The main findings of the vibration study for events held at Finsbury Park in July 2024 are summarised below:

- **There were no characteristic circa 2 Hz vibration events detected during Finsbury Park Concerts (Friday 5th to Sunday 7th July 2024).**
- **The maximum vibration level detected during Wireless Festival 2024 (Friday 12th to Sunday 14th July 2024) was similar to the maximum level detected during Wireless Festival 2022.**
- **Otherwise, the levels detected in the wider 2024 survey are typically lower than those reported in 2022.**
- **The bursts of vibration lasted typically for 10 seconds at a time.**

The vibration amplitudes of all the characteristic circa 2 Hz building sway events are below the threshold of 0.6 mm dynamic deflection, below which there is no credible evidence of vibration-induced cosmetic damage to building fabric (such as the cracking of fine plasterwork), and are therefore significantly below the levels needed to induce structural damage.

Purpose

This technical note reports the results from the monitoring of ground-borne vibration during Finsbury Park Concerts (Friday 5th to Sunday 7th July 2024) and Wireless Festival (Friday 12th to Sunday 14th July 2024), but concentrates on the results captured during Wireless 2024.

Vanguardia carried out a scientific study during the two weekends of the Wireless 2022 Festival and the Community Festival 2022 which confirmed the presence of vibration with a frequency of around a 2 Hz generated by the crowd jumping in-sync with the music, which caused a corresponding response within some of the nearby mid-rise buildings. A common theme in residents' reporting of previous vibration noted a swaying effect in their homes. Clothes hung in wardrobes swayed on their hangers, framed pictures hung on walls moved and tall pot-plants swayed. These phenomena are consistent with those observable by residents in very tall buildings on particularly windy days. Notwithstanding this, the levels of building sway measured during Wireless 2022 were confirmed to be below building damage thresholds from British and International standards.

No vibration monitoring was undertaken for festivals held in Finsbury Park in 2023 but for 2024 Vanguardia were commissioned by Festival Republic to undertake a second study, this time monitoring in seven different buildings to augment knowledge of the phenomenon beyond the two buildings originally monitored in 2022. Priority was given to the top floors of the mid-rise buildings along Seven Sisters Road adjacent to the park, in response to requests made during discussions with local residents prior to the event. The aim of the monitoring was to compare any circa 2Hz vibration detected during the 2024 Finsbury Park festivals to that measured in 2022 and to relevant thresholds relating to cosmetic damage to buildings and human perception of vibration. This was undertaken by measuring in the proximity of the crowd and in the homes of local residents who had agreed to facilitate the process by allowing the installation of a remote vibration monitor in their home.

The monitoring was undertaken by Dani Fiumicelli MSc, MCIEH, MIOA and supported by Leonardo Fernandez MEng, PgDip, AMIOA.

Since 1986 Dani has investigated vibration caused by sources including demolition and construction activities, plant and machinery, surface and underground railways, and from crowds at outdoor events in urban areas.

Leonardo Fernandez, MEng PgDip AMIOA, joined Vanguardia in 2021 and has experience in investigating the impact groundborne vibration originating from transportation sources and crowds jumping can have on building structures. Leonardo also took part in the 2022 vibration study where the presence of crowd-induced jumping wave was confirmed.

Methodology

A system of remote, synchronised, vibration monitoring was put into place. Seven Sigicom C22 tri-axial vibration sensors were deployed. Each was linked to the same online data platform so the signals uploaded would be automatically synchronised to one overall time stamp. This way, patterns of vibration could be compared at multiple locations for the same unique time stamp. Being a remote system means that continuous vibration monitoring could take place in the homes of local residents throughout the event days with minimum intrusion to the lives of the residents themselves.

The Sigicom C22 was selected as these are calibrated by the supplier for the frequency range of 1-80 Hz, this being the commonly adopted frequency range for the assessment of vibration in buildings and a range used consistently in both international and British standards. They are triaxial, meaning that they detect vibration vertically ('z' direction) and in both horizontal axes ('x' and 'y') simultaneously. For the monitoring, the horizontal axes were aligned with the local plan of the building in which they were installed with the 'x' direction being perpendicular to the windowed façade in each room and the 'y' direction being at 90 degrees to that. Care was taken to remain consistent so that 'x' and 'y' results can be compared for sensors between different buildings. This was easily achievable for the four buildings along Seven Sisters Road (Park House, Foxglove Court, Sunflower Court and 384-386 Seven Sisters Road), but for the monitoring locations further afield there will be some degree of rotation between buildings. The C22 monitors placed under the stage was orientated such that the 'x' and 'y' axes aligned with the major axes of the stage, with the 'y' axis facing the crowd.

Each Sigicom C22 was set up to measure vibration velocity and report peak particle velocity (PPV) levels in the units of mm/s. PPV was selected as the primary unit for this monitoring as it is easy to communicate and interpret and is commonly used as the unit for the assessment of probability of cosmetic damage to internal building fabric due to vibration.

In the context of building vibration, a PPV level of circa 1 mm/s is consistent with the vibration of the floors in a home caused by everyday activity such as walking around or opening and closing doors.

An example of vibration in a flat that cannot be associated with activity on the Wireless site due to the time of occurrence is provided in Figure 1. This shows the vibration measured on the floor of an apartment on the top floor of Foxglove Court in the early hours of the morning on Sunday 14th July (00:00-11:00) long after music has ceased for that given day. Vibration levels persist through the night when it is likely residents are sleeping, revealing a low level of constant background vibration in this apartment. The time signal of that higher amplitude is a modulating 10 Hz frequency consistent with the operation of a fan, chiller or other roof top equipment.

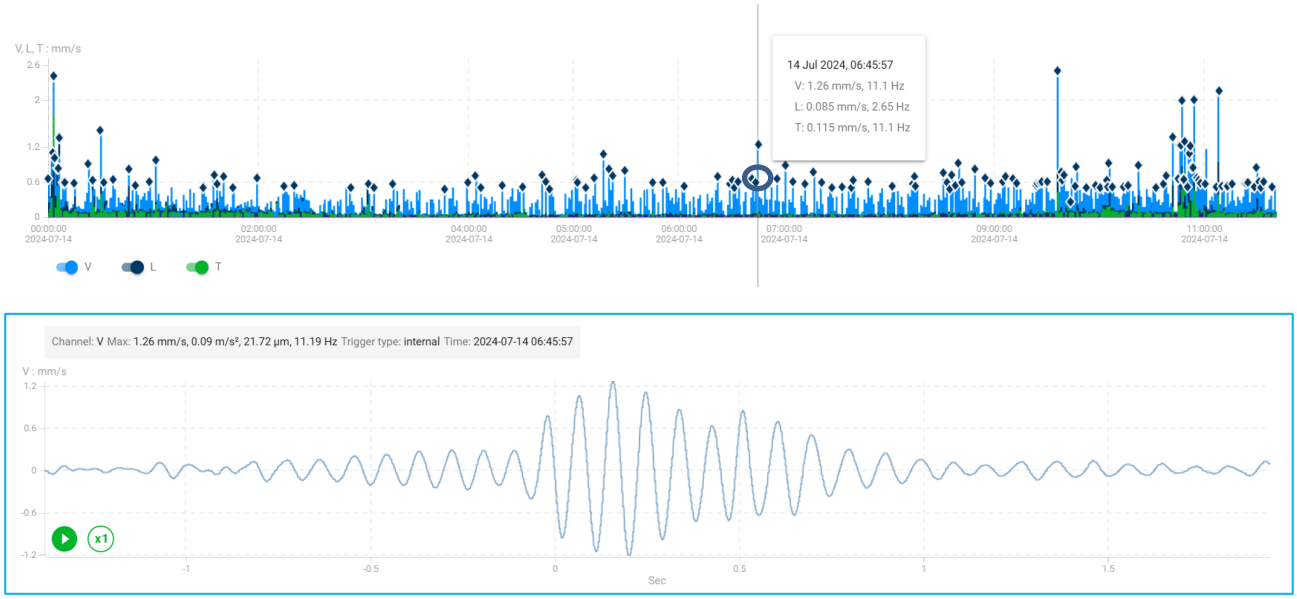


Figure 1 Top floor of Foxglove Court, early hours of Sunday 14th July 2024. PPV with units of mm/s.

This illustrates the need for the approach taken to the vibration monitoring for events held at Finsbury Park in July 2024 in order to isolate vibration that can be related directly to the event site rather than any other cause:

- Vibration levels were monitored continuously in seven local residential buildings.
- The buildings were selected according to proximity to the festival site and building height. Buildings that were tall, nearby and where residents were willing to install monitors were prioritised. As such, the top floors of Park House, Foxglove Court and 384-386 Seven Sister Road were selected.
- Every instance of floor vibration above a PPV of 0.5 mm/s triggered the saving of a five second segment of vibration time history. These triggered vibration 'occurrences' were interrogated to determine whether they were circa 2 Hz vibration events, akin to those identified during the 2022 study.
- As a check, these were compared to activity measured at the stage around the time of the peak synchronous event to assess likelihood that the vibration is related to the festival, as opposed to local vibration sources found within a residential apartment.
- The highest PPV occurrences were analysed to extract the highest level of PPV at each location which has the highest likelihood of being attributable to the festival crowd.

The monitoring locations used were:

- Top floor (Level 10) of Park House
- Top floor (Level 04) of Foxglove Court (Saturday 13th & Sunday 14th July 2024[2])
- Top floor (Level 04) of 384-386 Seven Sisters Road
- Level 03 of Sunflower Court (Friday 12th July 2024 only[2])
- Level 03 of Windsor House
- Level 01 of Chadworth House
- Level 01 of Rowley Gardens
- Under the stage of the Wireless Festival

[2] Monitor was moved from Level 03 Sunflower Court to Level 04 (top floor) of Foxglove Court on Saturday 14th July 2024 following the residents meeting in response to requests from Foxglove Court residents. Both buildings are of the same construction type and height.

Levels of vibration significance

Vibration in buildings, **when** of sufficient amplitude, is known to affect the fabric of the building in the form of vibration-induced cosmetic cracking in plasterwork or in masonry. However, vibration levels need to be relatively high before the onset of such cosmetic damage becomes likely. There is no credible evidence that low levels of vibration causes such damage. Cosmetic damage is commonly taken to indicate damage which is visible on interior decorated surfaces but does not affect the structural integrity or performance of the building. Examples of structural damage to building fabric (i.e. more than cosmetic damage) are rare except for narrow examples of blast-induced vibration or earthquake.

Human occupants are much more sensitive to vibration than their buildings are. Low frequency vibration (less than 10 Hz) tends to be experienced as whole body vibration. Everyday examples include the swaying motion experienced on a slender footbridge or the vertical impulse as a person overtakes you descending a lightweight stairway at speed. At higher frequencies in the range 10-100 Hz vibration tends to be felt in different parts of the body rather than a whole-body motion. Vibration from an idling diesel engine might be sensed by the occupants of a bus in the vibration of their calf or thigh muscles for example. Very low levels of vibration from passing trains or road traffic with an amplitude of less than 0.1 mm/s PPV at a frequency of 60+ Hz can sometimes result in audible structure-borne re-radiated noise.

Human response to vibration is commonly assessed in terms of a range of discomfort or annoyance once the vibration level is sufficiently above the threshold of perception to be noticeable by a person going about their day-to-day business. The threshold of perception varies with frequency but studies of human exposure to vibration in buildings focuses on the 1-10 Hz frequency range where the human body is most sensitive.

Day-to-day life in a residential dwelling can cause floor vibration levels in excess of **1 mm/s PPV** with **0.1 mms/ to 0.5 mm/s PPV** being typical. These levels can be perceptible as whole-body vibration by other occupants of the dwelling provided they are stationary at the time of the event. A house party with music and limited dancing can produce floor vibration levels in excess of **20 mm/s PPV**.

BS 6472-1: 2008 (Guide to evaluation of human exposure to vibration in buildings. Part 1: vibration sources other than blasting) gives this summary of human perception of whole-body vibration in buildings:

Perception thresholds for continuous whole-body vibration vary widely among individuals. Approximately half the people in a typical population, when standing or seated, can perceive a vertical weighted peak acceleration of 0.015 m/s/s... A quarter of the population would perceive a vibration of 0.01 m/s/s peak but the least sensitive quarter would only be able to detect a vibration of 0.02 m/s/s peak or more. Perception thresholds are slightly higher for vibration duration of less than about 1 second.

Note: the weighting used is W_b which progressively reduces the amplitude of vibration outside of the 5-10 Hz range to mimic typical patterns of human perception.

The swaying motions reported by residents are known to be at a frequency close to 2 Hz. At 2 Hz the above thresholds of perception translate to these equivalent PPV:

- W_b peak acceleration of 0.01 m/s/s for the most sensitive 25% of the population: **1.9 mm/s PPV**
- W_b peak acceleration of 0.015 m/s/s for 50% of the population: **2.9 mm/s PPV**
- W_b peak acceleration of 0.02 m/s/s for the least sensitive 25% of the population: **3.8 mm/s PPV**

At 6 Hz the thresholds become:

- W_b peak acceleration of 0.01 m/s/s for the most sensitive 25% of the population: **0.27 mm/s PPV**
- W_b peak acceleration of 0.015 m/s/s for 50% of the population: **0.41 mm/s PPV**
- W_b peak acceleration of 0.02 m/s/s for the least sensitive 25% of the population: **0.54 mm/s PPV**

Note the importance of frequency when using PPV to interpret human perception of vibration.

It is also useful to consider the floor vibration design levels that are targeted for new residential buildings. A night-time response factor of 1.4 is recommended (SCI P354, Design of floors for vibration: a new approach, 2009). This equates to a vertical peak acceleration of 0.07 m/s/s for frequencies between 4-8 Hz. The lowest natural frequency of a modern

residential floor is likely to be 6 Hz and at this frequency, residential floors are being designed for a **2.6 mm/s PPV** due to the footfall of occupants.

For the higher levels of lateral vibration commonly experienced in taller buildings, **ISO 10137: 2007** (Bases for design of structures – serviceability of buildings and walkways against vibrations) provides a target of 0.04 m/s/s for a building with a first bending or torsion mode at 2 Hz (typical of 10 story buildings) in a one-year return wind. This would equate to **3.2 mm/s PPV**.

Cosmetic damage in buildings is commonly assessed in terms of thresholds above which the onset of cosmetic damage due to transient vibration events should be considered. The most commonly used guidance is that from **BS 7385-2: 1993** (Evaluation and measurement for vibration in buildings – Part 2: guide to damage levels from ground borne vibration) which is reproduced in Figure 2.

BS 7385-2: 1993 also states

The guide values in Table 1 relate predominantly to transient vibration which does not give rise to resonant responses in structures, and to low-rise buildings. Where the dynamic loading caused by continuous vibration is such as to give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values in Table 1 may need to be reduced by up to 50 %.
NOTE There are insufficient cases where continuous vibration has caused damage to buildings to substantiate these guide values but they are based on common practice

It is important to note that the guidance given in BS 7385-2: 1993 relates to levels of vibration measured or predicted in the ground. For transient vibration in low rise buildings, the levels of vibration on the building fabric will be similar to those in the ground. For high rise buildings, and for suspended floors, there is the potential for dynamic magnification due to resonance of the whole building or in suspended floors. However, in this assessment measurements are made on the floor of high(er) rise buildings and therefore all potential magnification factors are directly accounted for in the measurement and the reduction of the values in Figure 2 need not be applied.

Vibration 'thermometer-equivalent'

The visual device of a thermometer is commonly used to explain the significance of different environmental factors such as temperature, of course, but also noise level, humidity and other factors. The significance of different levels of vibration is complicated by the need to consider frequency and also the different sensitivities of building occupants and building fabric.
The results section of this report shows that the vibration attributable to the Wireless Festival is that witnessed in more than one location simultaneously and that it is characterised by a clear, near sinusoidal, vibration at frequencies near to 2 Hz. Therefore, for simplicity and ease of use, a 'vibration thermometer' is offered at 2 Hz for reference when considering vibration linked to the swaying motion reported by residents and a further one for general floor vibration at 6 Hz:

2 Hz vibration 'thermometer-equivalent'

BS 6472-1:2008

- W_b peak acceleration of 0.01 m/s/s for the most sensitive 25% of the population: **1.9 mm/s** PPV
- W_b peak acceleration of 0.015 m/s/s for 50% of the population: **2.9 mm/s** PPV
- W_b peak acceleration of 0.02 m/s/s for the least sensitive 25% of the population: **3.8 mm/s** PPV

ISO 10137: 2007

- target of 0.04 m/s/s for a building with a first bending or torsion mode at 2Hz (typical of 10 story buildings) in a one-year return wind. This would equate to **3.2 mm/s PPV**.

BS 7386-2: 1993

- Unweighted vibration velocity equivalent to 0.6mm displacement **7.5 mm/s** PPV

6 Hz vibration 'thermometer-equivalent'

Day-to-day life in a residential dwelling

- floor vibration levels **0.1 mm/s to 0.5mm/s PPV** being typical but in excess of **1 mm/s PPV** possible.

BS 6472-1:2008

- W_b peak acceleration of 0.01 m/s/s for the most sensitive 25% of the population: **0.27 mm/s** PPV
- W_b peak acceleration of 0.015 m/s/s for 50% of the population: **0.41 mm/s** PPV
- W_b peak acceleration of 0.02 m/s/s for the least sensitive 25% of the population: **0.54 mm/s** PPV

SCI P354, 2009

- vertical peak acceleration of 0.07 m/s/s for frequencies between 4-8 Hz where the lowest natural frequency of a modern residential floors is likely to be found which for 6Hz is **2.6 mm/s PPV**.

Day-to-day life in a residential dwelling

- A house party with music and limited dancing can produce floor vibration levels in excess of **20 mm/s PPV**.

Line (see Figure 1)	Type of building	Peak component particle velocity in frequency range of predominant pulse	
		4 Hz to 15 Hz	15 Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures Residential or light commerical type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

NOTE 1 Values referred to are at the base of the building (see **6.3**).

NOTE 2 For line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) should not be exceeded.

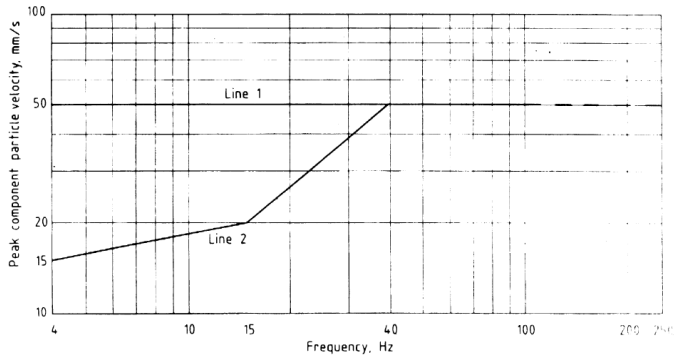


Figure 1 — Transient vibration guide values for cosmetic damage

Figure 2 BS 7385-2: 1993 Guidance for transient vibration thresholds for cosmetic damage

Vibration monitoring results from the 2024 survey

Following the methodology described above, every instance of floor vibration above a PPV of 0.5 mm/s triggered the saving of a segment of vibration time history. These have been interrogated to determine vibration events that occurred simultaneously (within a tolerance band of one second) across multiple buildings and at the stage, with circa 2 Hz waves being of particular interest. These synchronous occurrences are less likely to originate from local vibration sources within a single apartment and therefore are more likely to be attributable to sources of vibration associated with the festival. The highest PPV synchronous occurrences were analysed to extract the highest level of PPV at each location which has the highest likelihood of being attributable to the festival.

No synchronous 2 Hz occurrences were detected during the first weekend of music, Finsbury Park Concerts (Friday 5th to Sunday 7th July 2024), with the stage monitor never detecting a 2 Hz vertical jumping wave across three days of music, and so the focus of this results section will relate to vibration data captured during Wireless (Friday 12th to Sunday 14th July 2024).

<u>384-386 Seven Sisters Road</u>

Figure 3 provides an overview of the floor vibration measured at 384-386 Seven Sisters Road during the Wireless 2024 weekend.

The individual triggered vibration occurrence with the highest amplitude is interrogated.

At the top floor of this building, there is a high level of background vibration present even once Wireless Festival activities cease on any given day, with a small number of instantaneous peaks. The time histories for these are consistent with the monitor being disturbed by a person or animal. Such vibration events are termed 'masking vibration' and are typically short duration transients with higher frequency content and greater PPV, as shown in Figure 3 below.

Figure 3 384-386 Seven Sisters Road overview of vibration. Highest amplitude vibration event axial components highlighted (Bottom left – V axis, Bottom middle – L axis, Bottom right – T axis).

The circa 2 Hz vibration pattern only occurs at times where Wireless Festival is active across the weekend, and has a very distinctive sinusoidal vibration with near 2 Hz frequency that is apparent in all three axes but with highest amplitude in the horizontal plane which can often be traced back to a vertical wave of similar frequency detected close to the crowd at the stage. This vibration characteristic will become familiar as further analysis is reported. The distinctive 2 Hz vibration is attributable to movement of the crowd at the Wireless Festival which is explored further below.

There were 160 event-minutes where the circa 2 Hz vibration PPV event > 0.5 mm/s triggered the monitor on the top floor of 384-386 Seven Sisters Road within 2,020 minutes of music played during Wireless. These vibration events attributable to Wireless Festival were typically < 3 mm/s, with 3 mm/s being exceeded for a total of 57 seconds across 4 event-minutes over the weekend:

- Friday 12th July: 20:18, 20:28, 20.29,
- Saturday 13th July: 21:14, 21:15, 21:21, 22:30

- Sunday 14th July: No PPV events exceeding 3 mm/s.

Each triggered occurrence saved five seconds of sampled data. Occurrences were sometimes very close together in time forming one contiguous vibration 'event' lasting several seconds (up to 20 seconds in some instances although the amplitude of vibration will vary up and down during that period) and contained a characteristic (circa) 2 Hz sinusoid described above. Some of the occurrences or events were closely spaced in time. Some much further apart. The simultaneous occurrence with the highest vibration amplitude occurred in the top floor apartment on Saturday 13th July 2024 at 21:15 and was the instantaneous peak of a vibration event lasting 20 seconds. The time histories of that occurrence are shown in Figure 4. The highest amplitude of the three axial components is **5.34 mm/s PPV at 2.5 Hz**. This **corresponds to a dynamic displacement of 0.34 mm.**

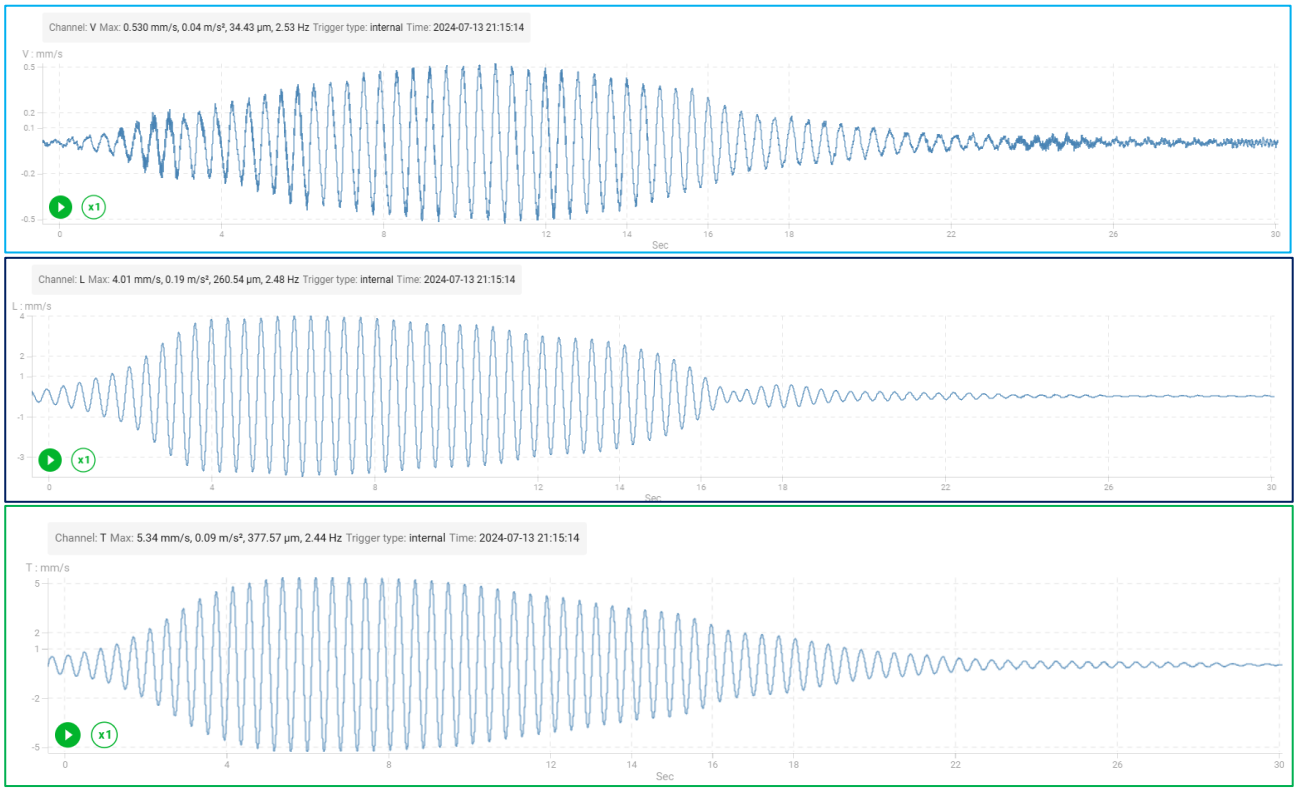
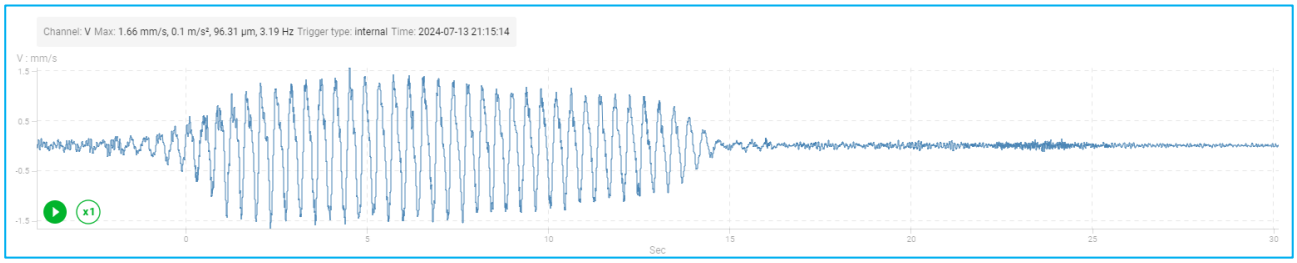


Figure 4 384-386 Seven Sisters Road – highest amplitude vibration event attributable to Wireless Festival crowd activity. Transients captured on top floor of 384-386 Seven Sisters Road on 21:15 at Saturday 13th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

Figure 5 shows the vibration measured amongst the Wireless audience at the same time as the peak amplitude occurrence data given in Figure 4. The ground vibration at the audience is predominantly in the vertical axis and is consistent with a group of people jumping rhythmically at a rate of about 2 jumps per second (120 jumps / beats per minute). The PPV in the ground is 1.66 mm/s in the vertical axis. In this case, selected because it provides the maximum vibration at this location during the entire Wireless weekend, this translates to a component amplitude of **5.34 mm/s PPV in the horizontal plane at Level 04 of 384-386 Seven Sisters Road**. This 3.2x magnification from crowd to apartment is taken to be due to resonance effects at this particular building.



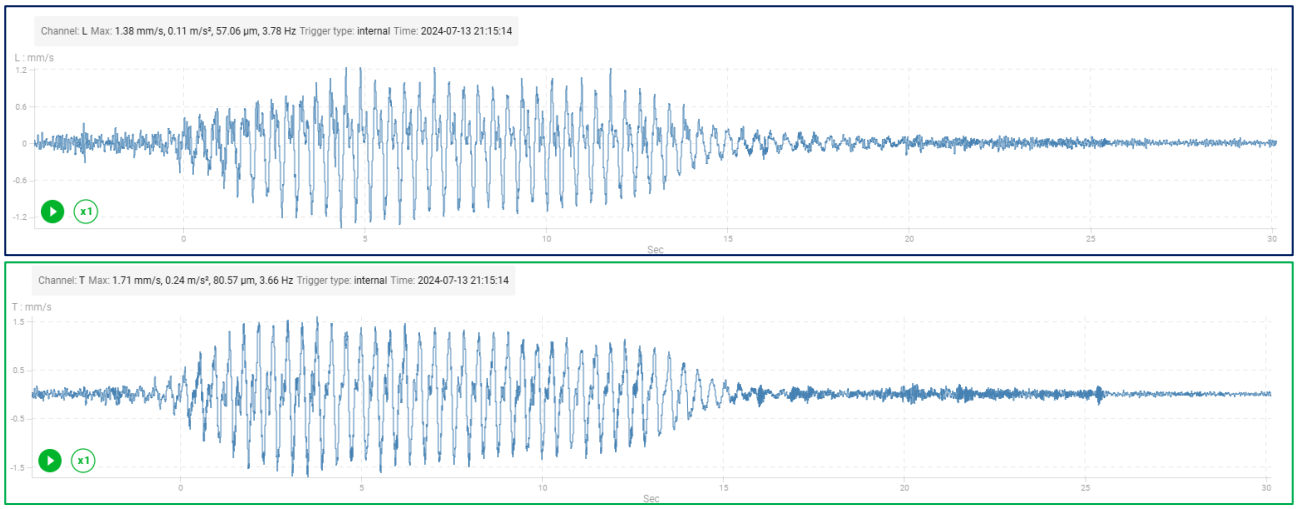


Figure 5 Inspection of ground vibration at the stage captured at 21:15 on Saturday 13th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

There is a > 2 Hz signal superimposed onto the vibration signal in the ground under the stage that doesn't propagate to the upper floors of Park House. This has a frequency content in the range 20-60 Hz and is likely to emirate from sub-woofers placed under the stage. It is at an much lower amplitude than the 2 Hz component and therefore plays no significant part in this assessment, as established during the 2022 study. The building sway phenomena reported relates to the natural frequency of the mid-rise buildings coinciding with the jumping frequency of the crowd (circa 2 Hz). The 2 Hz phenomenon is not directly related to the music playing through loudspeakers but rather to the subsequent jumping response of the crowd.

Foxglove Court

Figure 6 provides an overview of the floor vibration measured at Foxglove Court during Saturday 13th July and Sunday 14th July 2024. The monitor was moved to this location on from Level 03 Sunflower Court in response to a request made during the residents meeting on Saturday 13th July, to ensure this monitoring exercise captured representative levels of vibration experienced in these buildings.

At the top floor of this building, there is a high level of masking background vibration present even once Wireless Festival activities cease on any given day, with a small number of instantaneous peaks. The time histories for these are consistent with the monitor being disturbed by a person or animal, for which the transient waveforms are shown in Figure 6 below.

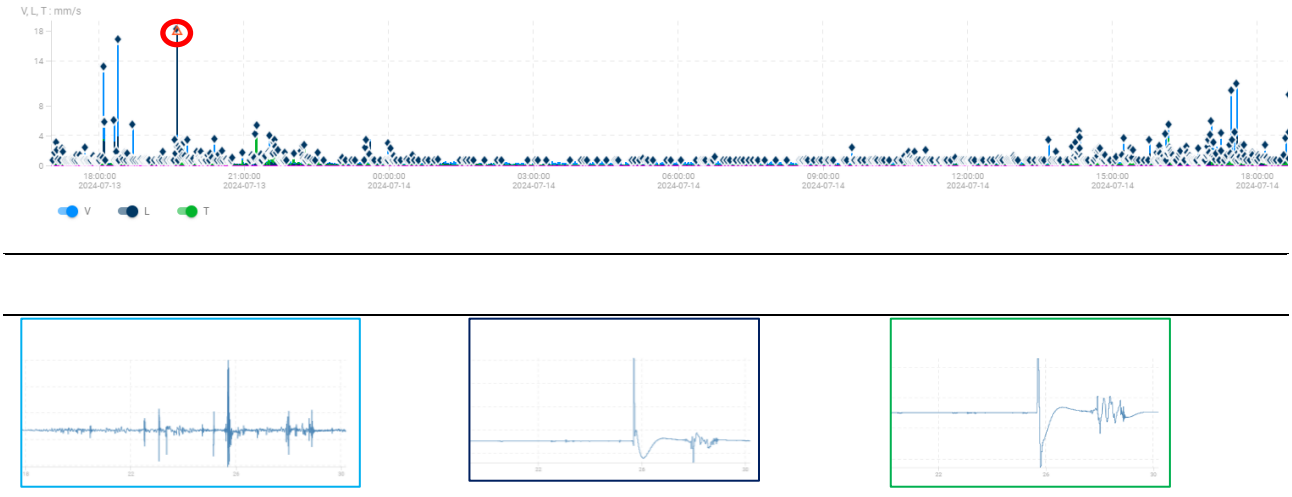


Figure 6 Foxglove Court overview of vibration. Highest amplitude vibration event axial components highlighted (Bottom left – V axis, Bottom middle – L axis, Bottom right – T axis).

There were 87 individual event-minutes, within the 1,760 minutes of music monitored at this location during the Saturday 13th and Sunday 14th at Wireless, where a characteristic (circa) 2 Hz vibration PPV event > 0.5 mm/s triggered the monitor on the top floor of Foxglove Court, typically lasting less than 10 seconds within a given event-minute and nowhere near the full duration of the minute interval. These vibration events attributable to Wireless Festival were typically < 3 mm/s, with 3 mm/s being exceeded for a total of 28 seconds across 4 event-minutes over the weekend:

- Saturday 13th July: 17:06, 19:45, 21:13, 21:15
- Sunday 14th July: No PPV events exceeding 3 mm/s.

The simultaneous occurrence with the highest vibration amplitude occurred in the top floor apartment on Saturday 13th July 2024 at 21:15 and was the instantaneous peak of a vibration event lasting 20 seconds. The time histories of that occurrence are shown in Figure 7. The maximum single amplitude of the three axial components is **5.52 mm/s PPV at 2.5 Hz**. This corresponds to a dynamic displacement of 0.35 mm.

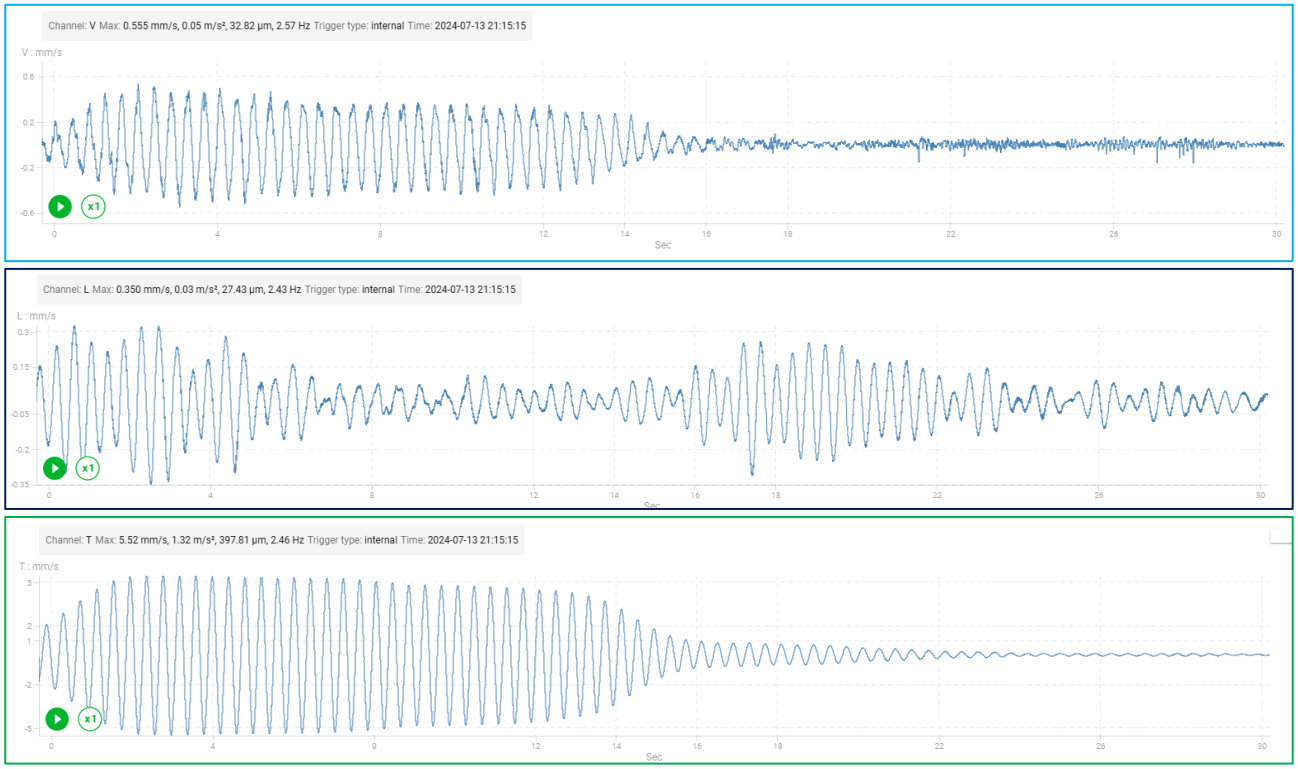


Figure 7 Foxglove Court – highest amplitude vibration event attributable to Wireless Festival crowd activity – captured on the top floor of Foxglove Court on 21:15 at Saturday 13th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

Figure 5 shows the vibration measured amongst the Wireless audience at the same time as the data given in Figure 7 for Foxglove Court. This is the same crowd-jumping event which also caused the maximum instantaneous peak at the top floor of 384-386 Seven Sisters Road. The PPV in the ground is 1.66 mm/s in the vertical axis. At Level 04 of Foxglove Court this translates to a component amplitude of 5.52 mm/s PPV in the horizontal plane, meaning that the ground wave is amplified by a factor of 3.3x at the top floor, taken to be due to resonance effects at this particular building.

Park House

Figure 8 provides an overview of the floor vibration measured at Park House during the Wireless 2024 weekend.

At the top floor of this building, there is a high level of masking background vibration present even once Wireless Festival activities cease on any given day, with a small number of instantaneous peaks. The time histories for these are consistent with the monitor being disturbed by a person or animal, for which the transient waveforms are shown in Figure 8 below.

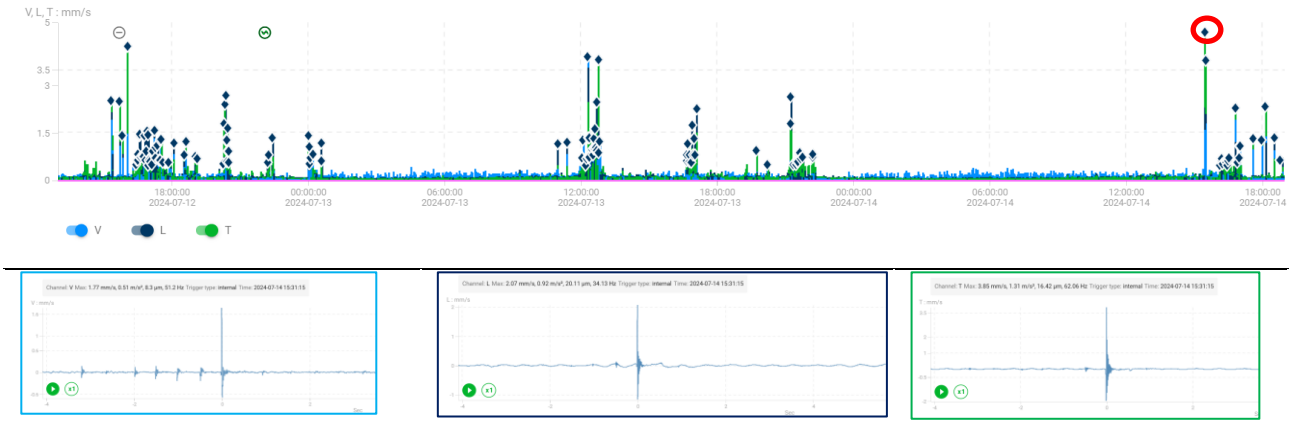
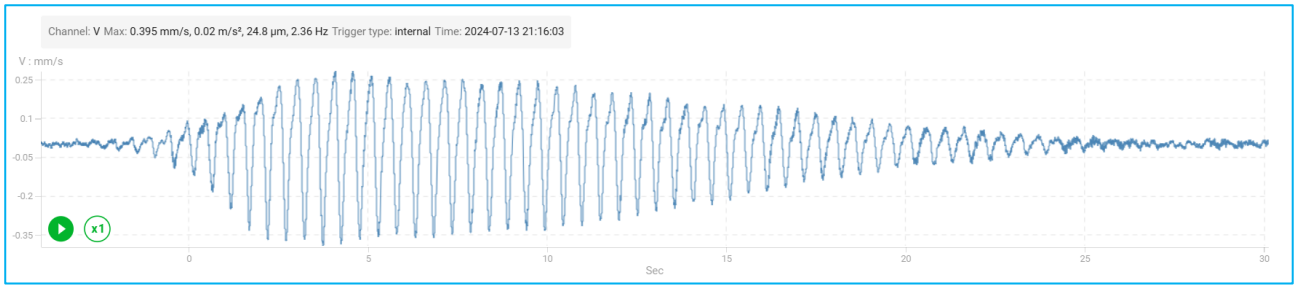


Figure 8 Park House overview of vibration. Highest amplitude vibration event axial components highlighted (V axis – bottom left top, L axis – bottom middle & T axis – bottom right).

There were 101 event-minutes, within the 2,020 minutes of music played during Wireless, where a characteristic (circa) 2 Hz vibration PPV event > 0.5 mm/s triggered the monitor on the top floor of Park House, typically lasting less than 10 seconds within a given event-minute and nowhere near the full duration of the minute interval. These vibration events attributable to Wireless Festival were typically < 2 mm/s, with 3 mm/s being exceeded for a total of 28 seconds across 4 event-minutes over the weekend:

- Friday 12th July: 20:20, 20:23
- Saturday 13th July: 17:06, 21:16
- Sunday 14th July: No PPV events exceeding 3 mm/s.

The simultaneous occurrence with the highest vibration amplitude occurred in the top floor apartment on Saturday 13th July 2024 at 21:16 and was the instantaneous peak of a vibration event lasting 20 seconds. The time histories of that occurrence are shown in Figure 9. The highest amplitude of the three axial components is **2.68 mm/s PPV at 2.0 Hz**. This **corresponds to a dynamic displacement of 0.24 mm.**



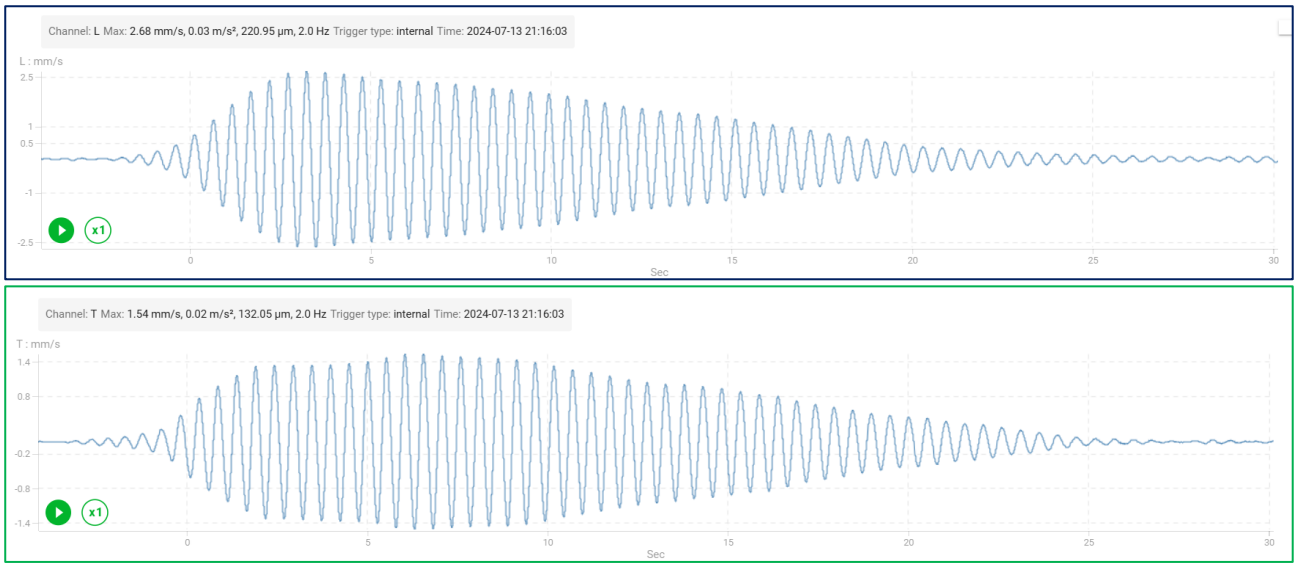


Figure 9 Park House – highest amplitude vibration event attributable to Wireless Festival crowd activity captured on the top floor of Park House at 21:16 on Saturday 13th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

Figure 10 shows the vibration measured amongst the Wireless audience at the same time as the peak amplitude occurrence data given in Figure 9. The ground vibration at the audience is predominantly in the vertical axis and is consistent with a group of people jumping rhythmically, as was found for the peaks measured in 384-386 Seven Sisters Road and Foxglove Court. The PPV in the ground is 1.17 mm/s in the vertical axis. At Level 10 of Park House this translates to a component amplitude of 2.68 mm/s PPV in the horizontal plane, meaning that the ground wave is amplified by a factor of x2.3 at the top floor of this particular building.

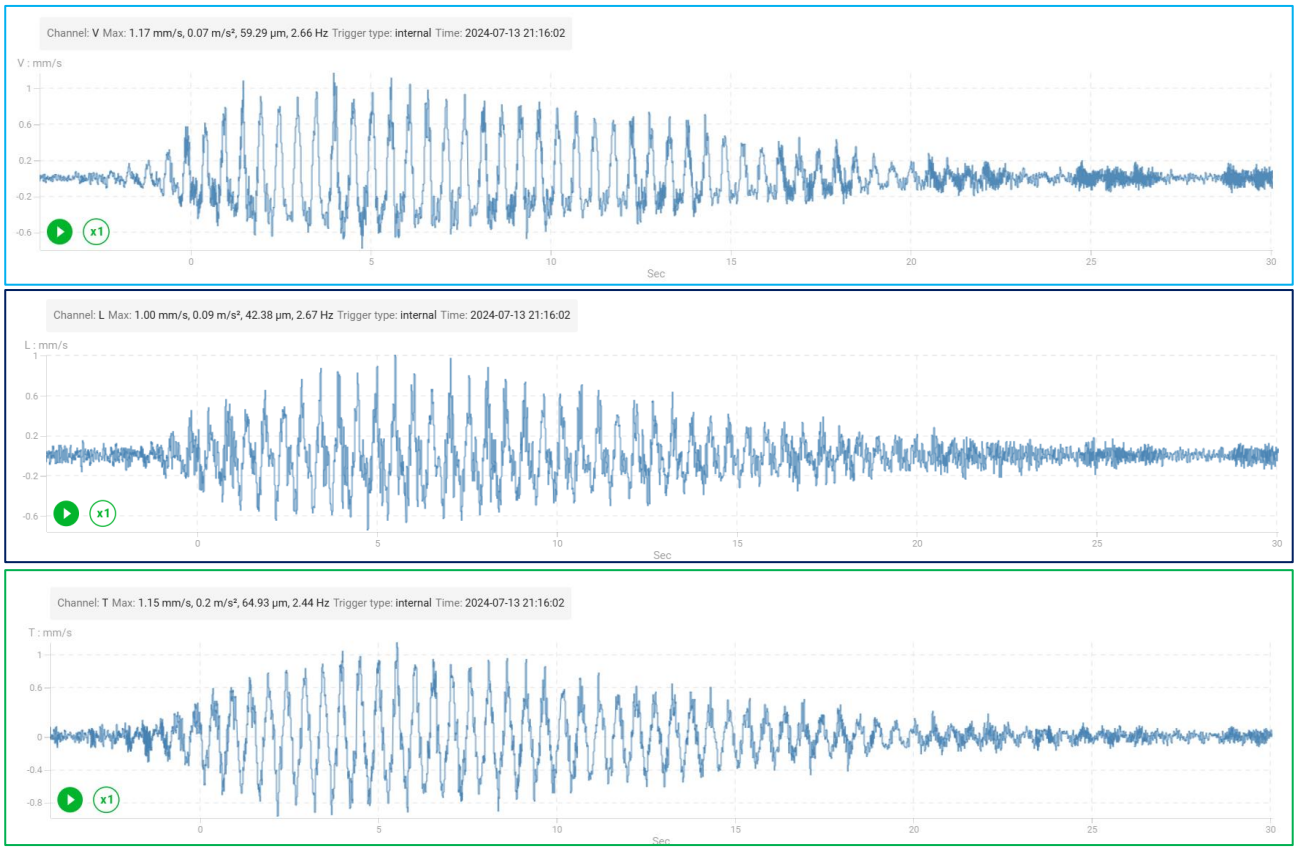


Figure 10 Inspection of ground vibration at the stage captured at 21:16 on Saturday 13th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

Windsor House

Figure 11 provides an overview of the floor vibration measured at Windsor House during the Wireless 2024 weekend.

The resident informed us that they vacated the flat for weekend, hence the low levels of masking background vibration when compared to other residences presented in this report. The individual triggered vibration occurrence with the highest amplitude is interrogated. The time histories for these are consistent with a crowd-induced vibration of similar frequency detected at a similar time at the stage. These waveforms are shown in Figure 12 and Figure 13 below.

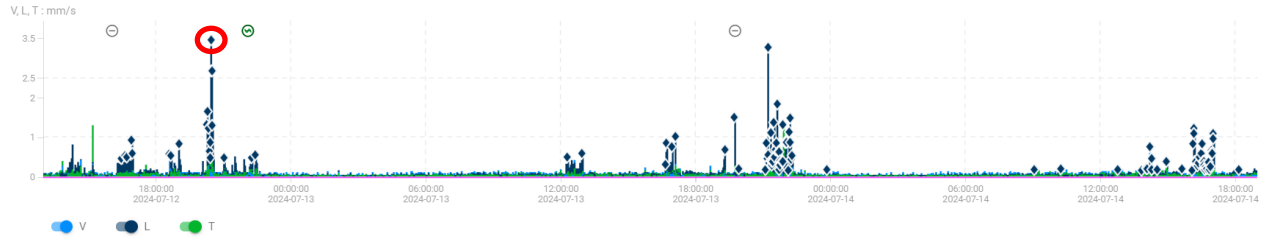
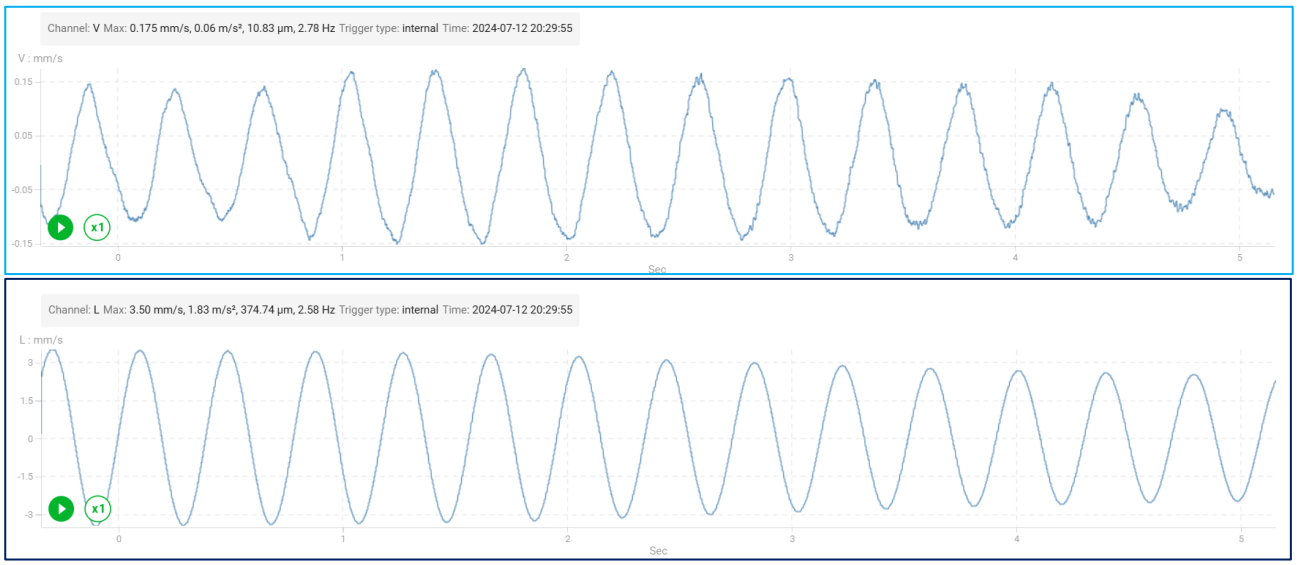


Figure 11 Windsor House overview of vibration. Highest amplitude vibration event axial components highlighted

There were 72 individual event-minute, within the 2,020 minutes of music played during Wireless where a characteristic (circa) 2 Hz vibration PPV event > 0.5 mm/s triggered the monitor on Level 03 of Windsor House, typically lasting less than 10 seconds within a given event-minute and nowhere near the full duration of the minute interval. These vibration events attributable to Wireless Festival were typically < 1 mm/s, with 2 mm/s being exceeded for a total of 34 seconds across 3 event-minutes over the weekend:

- Friday 12th July: 20:28, 20:29
- Saturday 13th July: 21:14
- Sunday 14th July: No PPV events exceeding 2 mm/s.

The simultaneous occurrence with the highest vibration amplitude occurred in the top floor apartment on Friday 12th July 2024 at 20:29 and was the instantaneous peak of a vibration event lasting 20 seconds. The time histories of that occurrence are shown in Figure 12. The highest amplitude of the three axial components is **3.5 mm/s PPV at 2.6 Hz**. This corresponds to a dynamic displacement of 0.21 mm.



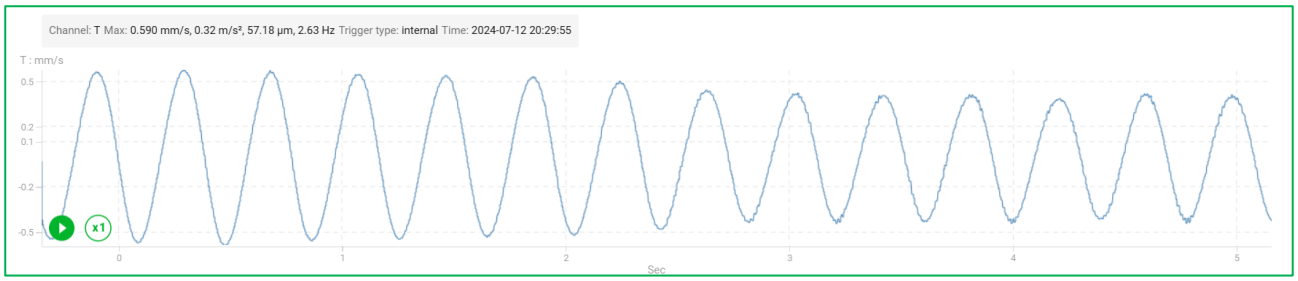


Figure 12 Windsor House – highest amplitude vibration event attributable to Wireless Festival crowd activity captured on the top floor of Park House at 20:29 on Friday 12th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

Figure 13 shows the vibration measured amongst the Wireless audience a few seconds before the peak amplitude occurrence data given in Figure 12. The ground vibration at the audience is predominantly in the vertical axis and is consistent with a group of people jumping rhythmically to the music on stage. The PPV in the ground is 1.66 mm/s in the vertical axis. At Level 03 of Windsor House this translates to a component amplitude of 3.50 mm/s PPV in the horizontal plane, meaning that the ground wave is amplified by a factor of x2.23 at Level 03 of this particular building. The overall dynamic amplification from ground floor to top floor cannot be determined from the results but is likely to be of the order of 3.0x.

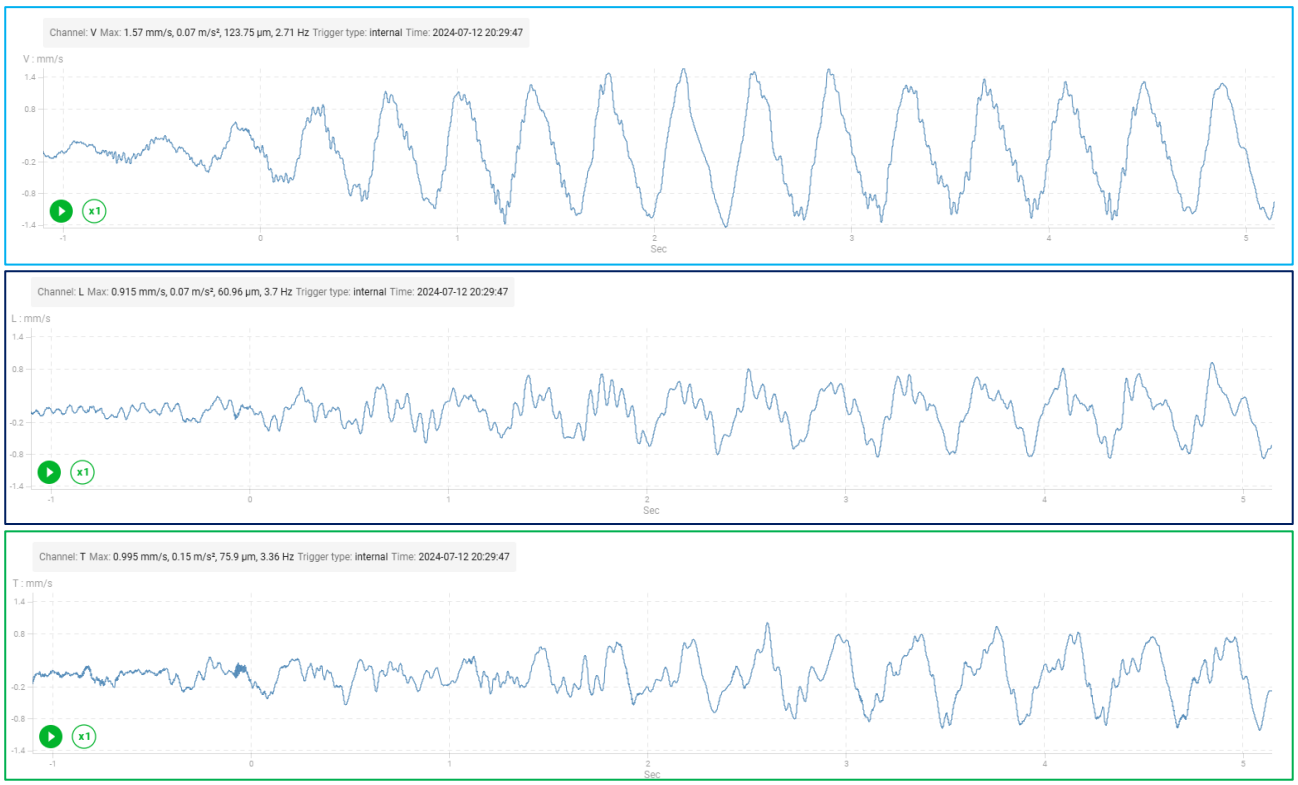


Figure 13 Inspection of ground vibration at the stage captured at 20:29 on Friday 12th July 2024 (Top – V axis, Middle – L axis. Bottom – T axis).

There is a > 2 Hz signal superimposed onto the vibration signal in the ground under the stage that doesn't propagate to the upper floors of Windsor House. This has a frequency content in the range 20-60 Hz and is likely to emirate from sub-woofers placed under the stage. It is at an much lower amplitude than the 2 Hz component and therefore plays no significant part in this assessment, as established during the 2022 survey.

Complaints

Despite the fact that no synchronous 2 Hz occurrences were detected during the first weekend of music (Finsbury Park Concerts, Friday 5th to Sunday 7th July 2024), 5 complaints relating to vibration were received on Saturday 6th July 2024. However, 4 of 5 complaints originate from one complainant and appear to be referring to noise rather than building sway, describing "loud vibrations" as opposed to floor movement or objects shaking. Additionally, the location of the complainant is significantly further away from the festival stage (750 metres) than the properties on Seven Sisters Road that have been studied extensively during the second weekend (100-200 metres). The results at those buildings which did not show any building sway during the first weekend. Vibration data at these larger separating distances (e.g. Rowley Gardens) similar to the location of the complaints during the first weekend is very much lower than at the closest receptors.

There were 13 building sway complaints received from 12 different residents during the second weekend (Wireless Festival, Friday 12th to Sunday 14th July), 11 of which live in mid-rise buildings along Seven Sisters Road. These complaints were correlated to periods where building sway was occurring at the monitoring locations along Seven Sisters Road during Wireless. Residents were offered the opportunity to discuss their concerns on a call with Vanguardia vibration specialists, who explained how the amplitudes of building sway were not giving rise to building damage.

Principal findings from the data results

At the top floor of 384-386 Seven Sisters Road, within the 2,020 minutes of music played during Wireless, there were 160 individual event-minutes when the circa 2 Hz vibration was recorded, typically being in short bursts of lateral motion at low amplitudes of < 3 mm/s which lasted up to 10 seconds. The characteristic 2 Hz vibration exceeded 3 mm/s for a total of 57 seconds across the weekend, with a single instance where PPV exceeded 5 mm/s, reaching 5.3 mm/s for 5 seconds at 2.5 Hz which corresponds to a dynamic displacement of 0.34 mm.

At the top floor of Foxglove Court, within the 1,760 minutes of music monitored at this location during the Saturday 13th and Sunday 14th at Wireless, there were 87 individual event-minutes when the circa 2 Hz vibration was recorded, typically being in short bursts of lateral motion at low amplitudes of < 3 mm/s which lasted up to 10 seconds. The characteristic 2 Hz vibration exceeded 3 mm/s for a total of 28 seconds across Saturday 13th and Sunday 14th, with a single instance where PPV exceeded 5 mm/s, reaching 5.5 mm/s for 7 seconds at 2.5 Hz which corresponds to a dynamic displacement of 0.35 mm.

The two short intervals of 5 and 7 seconds respectively with a dynamic displacement of circa 0.35 mm remain below the lowest threshold for which there is credible evidence of vibration-induced cosmetic damage to building fabric (typically fine cracking in plasterwork). That threshold is a vibration velocity of 5 mm/s at frequencies at or above 4 Hz and a dynamic displacement of 0.6 mm at frequencies 1-4 Hz. In this case it is the 0.6 mm dynamic displacement threshold that it relevant due to the frequency involved.

At the top floor of Park House, within the 2,020 minutes of music played during Wireless, there were 101 individual event-minutes of the circa 2 Hz lateral vibration at low levels of < 2 mm/s, typically lasting up to 10 seconds. It exceeded 2 mm/s for a total of 28 seconds across the weekend, but never exceeded 3 mm/s PPV on the floor at 2 Hz, which is equivalent to a dynamic displacement of 0.24 mm.

On Level 03 of Windsor House, within the 2,020 minutes of music played during Wireless, there were 72 individual event-minutes of the circa 2 Hz lateral vibration at low levels of < 1 mm/s, typically lasting up to 10 seconds. It exceeded 2 mm/s for a total of 34 seconds across the weekend, but never exceeded 3.5 mm/s PPV on the floor at 2.6 Hz, which is equivalent to a dynamic displacement of 0.22 mm.

Away from these upper floor apartments, peak vibration velocities (PPV) for the circa 2 Hz horizontal vibration were typically 1 mm/s or less and never exceeded 2 mm/s (Chadworth House and Rowley Gardens).

Residents' observations of a systematic swaying motion of their buildings can be attributed to this circa 2 Hz horizontal vibration with a distinctive time pattern that is also evident in the ground under the Wireless Festival audience. Levels of vibration in the ground, consistent with a group of people jumping at 120+ beats per minute. The levels of ground

vibration caused by the crowd are not uncommonly high at < 5.5 mm/s, but the duration (despite being a matter of seconds in duration) is sufficiently long to allow resonance of the local taller buildings to build up (a naturally occurring effect) and this magnifies the vibration at the top of the buildings.

Conclusions

No characteristic 2 Hz vibration was detected during the first weekend music (Finsbury Park Concerts, Friday 5th July to Sunday 7th July), with complaints received from 2 separate complainants appear to be relating to disturbing noise as opposed to building sway which is the subject of this technical note. There were 13 building sway complaints received from 12 different residents during the second weekend (Wireless Festival, Friday 12th to Sunday 14th July), 11 of which live in mid-rise buildings along Seven Sisters Road. These complaints were correlated to periods where building sway was occurring at the monitoring locations along Seven Sisters Road during Wireless. A swaying-type mode of vibration is already known and reported by residents living at higher level floors of the taller buildings near the festival site at Finsbury Park. The monitoring reported here explains the origins of that vibration and establishes both the number of occurrences over the Wireless Festival weekend and their amplitude.

The levels of vibration measured are not uncommon in buildings and could arise at other locations from high winds or construction works at a neighbouring property. The unusual features this occasion is the low frequency, which is caused by crowds-jumping in unison to the music and not the music being played by subwoofers themselves, as established during the 2022 study.

The vibration levels are always significantly below published thresholds for cosmetic damage to plasterwork being 0.6 mm dynamic displacement at 2 Hz. The levels are lower than those caused by common events in residences such as slamming doors or dropping heavy items on the floor. The characteristic 2 Hz building sway attributed to crowds-jumping is present within the residences for a small proportion of event-minutes relative to the total number of minutes music is being played across Wireless, with the duration of building sway typically lasting less than 10 seconds and not anywhere near the full minute interval during any given event-minute.

At the top floors of Foxglove Court and 384-386 Seven Sisters Road there was a single vibration event lasting 7 seconds over the Wireless Festival weekend when a characteristic (circa) 2 Hz vibration on the floor was recorded as exceeding 5 mm/s PPV. The instantaneous maximum PPV of 5.5 mm/s PPV at 2.5 Hz corresponds to a dynamic displacement of 0.36 mm, which is below the 0.6 mm threshold for the onset of potential cosmetic damage (typically fine cracking) in plasterwork.

Otherwise, the characteristic 2 Hz vibration level, when it occurred (which was within 160 event-minutes within 2,020 minutes of music played at Wireless at 384-386 Seven Sisters Road and 87 individual minutes within the 1,760 minutes of music monitored at Foxglove Court during Wireless) were typically below 3 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

Within the top floor of Park House, the characteristic 2 Hz vibration level, when it occurred (which was 101 event-minutes within the 2,020 minutes of music played at Wireless) were typically below 2 mm/s PPV and on some limited occasions up to 3 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

On Level 03 of Windsor House, the characteristic 2 Hz vibration level, when it occurred (which was 72 event-minutes over the 2,020 minutes of music played at Wireless), were typically below 2 mm/s PPV and on some limited occasions up to 3.5 mm/s PPV, with the duration of building sway events typically lasting less than 10 seconds and at amplitudes well below the established thresholds for cosmetic damage to plasterwork.

The main findings of the vibration study for events held at Finsbury Park in July 2024 are summarised below:

- **There were no characteristic circa 2 Hz vibration events detected during Finsbury Park Concerts (Friday 5th to Sunday 7th July 2024).**
- **The maximum vibration level detected during Wireless Festival 2024 (Friday 12th to Sunday 14th July 2024) was similar to the maximum level detected during Wireless Festival 2022.**
- **Otherwise, the levels detected in the wider 2024 survey are typically lower than those reported in 2022.**
- **The bursts of vibration lasted typically for 10 seconds at a time.**
- **The vibration amplitudes of all the characteristic circa 2 Hz building sway events are below the threshold of 0.6 mm dynamic deflection, below which there is no credible evidence of vibration-induced cosmetic damage to building fabric (such as the cracking of fine plasterwork), and are therefore significantly below the levels needed to induce structural damage.**

Krankbrother Finsbury Park Events August 2024

Ecological Mitigation Review

September 2024

Prepared for
Krankbrother

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Wivenhoe
Essex
CO7 9TF

Report Title	Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Review
Client	Krankbrother
Client Representative	Ash Walker Production & Operations Director
Author	Pat Hatch MCIEEM
Report Status	Final
Date of Issue	10th September 2024

This report has been compiled in accordance with BS 42020:2013 Biodiversity – Code of practice for planning and development, as has the survey work to which it relates. The information, advice and opinions provided here have been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

The impact assessment and recommendations set out in this report are based on professional experience and available guidelines.

I confirm that the views expressed are my true and professional bona fide opinions.

CONTENTS

Krankbrother Finsbury Park Events, August 2024

Ecological Mitigation Review

1. Introduction

1.1 General Introduction

This report has been prepared by Pat Hatch Ecology for Krankbrother. It comprises a review of ecological mitigation measures which were carried out during two events held at Finsbury Park in August 2024. It includes the results of the monitoring of ecological impacts and mitigation measures at the 2024 events and recommendations for mitigation measures for future events at the site.

This document should be read in conjunction with the events' mitigation plan, which includes an assessment of potential impacts in addition to agreed mitigation measures which were put in place during the events (*Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024).

1.2 Event Description

Krankbrother Finsbury Park Events consists of two music events held over the course of consecutive weekends in August 2024, the first being a three-day event on 2nd to 4th August, the second a two-day event on 10th and 11th August. Up to 10,000 people attended the events.

The events included two live performance stages and the use of sound systems, generators and lighting. Festival site plans should be consulted for the precise locations of relevant features, including perimeter and internal fences, stages, lighting rigs, generators and other event infrastructure and equipment, plus trees and shrub areas.

The events took place within the northern area of Finsbury Park, which consists of parkland (grassland with scattered trees) typical of much of the rest of the park.

1.3 Mitigation Objectives

The mitigation measures which are detailed in the event mitigation plan are designed to minimise the risk of causing significant harm or disturbance to wildlife and wildlife habitats, particularly trees and legally protected and otherwise notable species.

For details of potential impacts and the rationale behind the identification of appropriate mitigation measures, see *Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024.

1.4 Monitoring Objectives

Monitoring of impacts and mitigation measures, the results of which are reported in this document, is designed to determine the effectiveness of mitigation and identify potential refinements and additional measures for future events at this site.

Monitoring consisted of the following elements:

- Three site visits by the consultant ecologist (two visits during the pre-event build period, one during the post-event break period), during which the mitigation measures detailed in the Ecological Mitigation Plan, their implementation and effectiveness were assessed.
- A post-event review by the event organisers and the consultant ecologist.
- Preparation of this monitoring report by the consultant ecologist, detailing the findings of the above assessment and making recommendations for future events.

The objectives of the monitoring site visits were as follows:

- To determine whether impact mitigation measures detailed in the Ecological Mitigation Plan had been carried out.
- To determine the effectiveness or otherwise of mitigation measures.
- To identify refinements to existing mitigation measures for application at future events.
- To identify further mitigation measures for application at future events.

1.5 Competence

Pat Hatch MCIEEM has twenty years' experience as a consultant ecologist. He has considerable experience of many types of development-related ecological surveys and mitigation work, including site and habitat appraisals, botanical surveys and surveys and mitigation schemes for legally protected and other species (e.g., bats, birds, great crested newts, reptiles, water voles, otters and badgers). Pat specialises in bats, has a great deal of experience of development-related and other bat surveys and mitigation and has held a Natural England licence to disturb and handle bats since 2001 (current Level 2 Survey Licence registration number 2015-15460-CLS-CLS).

2. Monitoring Results

2.1 Tree Protection

2.1.1 Mitigation Measures

The following measures were prescribed in the event mitigation plan (*Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024) in order to protect trees at the event site.

"*Mature Oak*

- The mature oak located close to the northern event boundary will be protected for the duration of both events by the installation of temporary barrier fencing, which will be placed at the canopy drip line;
- No event-related activities, including vehicle movement and storage of materials, will be allowed within the fenced exclusion area.

London Planes

- The London planes which form an avenue of trees along the park road where it passes through the event site will be protected; temporary barrier fencing will be placed at three metres out from the stem of each tree and retained during the event build period to prevent potentially damaging activities in the vicinity of the trees;
- No event-related activities, including vehicle movement and storage of materials, will be allowed within the fenced exclusion areas;
- Temporary ground protection will be installed around those trees which are located within the vicinity of the main stage and retained during the event in order to avoid soil compaction;
- Those avenue plane trees which are not subject to ground protection will be provided with a mulch placed over the roots, extending out to the canopy drip line.

Horse Chestnut

- A horse chestnut at the site which is in a poor state of health will be protected by temporary fencing and mulched."

2.1.2 Compliance

The protection of the most important of the site's trees (i.e., a mature oak, the avenue of limes and a horse chestnut) through the establishment of marked exclusion zones was successful. Care should be taken to ensure that all exclusion zones are marked out well in advance of pre-event build and post-event break down periods.

Monitoring undertaken by the consultant ecologist during site visits carried out in the pre-event build period and post-event break period recorded the following findings. Negative findings are shown in italics.

Mature Oak

- Temporary barrier fencing around the mature oak located close to the northern event boundary was correctly placed at the canopy drip line and remained in place throughout the events, including the build and break periods. No event-related activities, including vehicle movement and storage of materials, took place within the fenced area. See figure 3, Appendix 1.

London Planes

- The majority of exclusion zones (temporary barrier tape placed at three metres out from the stem of each tree) were correctly placed and remained in place throughout the build and break periods. See figures 1 and 2, Appendix 1.
- Those avenue plane trees which were not subject to ground protection were provided with a mulch placed over the roots, extending to the canopy drip line.
- Temporary ground protection around trees in the vicinity of the main stage was correctly installed, and retained during the course of the events.
- No instances of damage to tree roots or stems were recorded.
- *Some exclusion zones were not marked out prior to the commencement of delivery and installation of event materials and equipment during the first morning of the pre-event build period.* However, there was no evidence of damage to temporarily unprotected trees and all exclusion zones were marked out soon after the start of deliveries and installation.

Horse Chestnut

- The horse chestnut was protected by a mulch and an exclusion zone marked by temporary barrier tape.

2.2 Protection of Shrub Areas

2.2.1 Mitigation Measures

The following measures were prescribed in the event mitigation plan (*Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024) in order to protect trees at the event site.

- "Areas of shrubs will be protected by the installation of temporary fencing, which will be retained for the duration of both events.
- No event-related activities, including vehicle movement and storage of materials, will be allowed within the fenced exclusion areas."

2.2.2 Compliance

The protection of areas of shrubs through the establishment of fenced exclusion zones was successful.

Monitoring undertaken by the consultant ecologist during site visits carried out in the pre-event build period and post-event break period recorded the following findings.

- Temporary fencing was placed correctly around areas of shrubs and retained for the duration of the events.
- No evidence of habitat damage caused by event-related activities within the fenced exclusion areas was recorded during the post-event site visit.

2.3 Disturbance

2.3.1 Mitigation Measures

The following measures were prescribed in the event mitigation plan in order to minimise the risk of causing significant disturbance to wildlife (see *Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024).

- "Site lighting will seek to avoid, as far as possible, the direct illumination of shrubby areas and tree canopies.
- Generators will be sited away from shrubby areas and trees, as far as practical.
- Event performances will cease no later than 22.00 hours.
- The Ecological Clerk of Works will make regular checks of the site for nesting birds; if any occupied bird nests are found, measures will be taken as soon as possible to reduce potential disturbance (e.g., by re-siting generators or other sources of disturbance), where practical."

2.3.2 Compliance

The measures prescribed in the event mitigation plan in order to minimise disturbance were put in place.

Monitoring undertaken by the consultant ecologist during site visits carried out in the pre-event build period and post-event break period recorded the following findings.

- Site lighting and generators were sited away from shrubby areas and trees, as far as practical.
- Event performances ceased no later than 22.00 hours.
- No occupied bird nests were found during regular checks by the consultant ecologist (Ecological Clerk of Works).

2.4 Trapping

2.4.1 Mitigation Measures

The following measure was prescribed in the event mitigation plan (*Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024) in order to protect any wild animals that might become trapped within the event perimeter.

"In the unlikely event that a wild animal becomes trapped within the event perimeter, the organisers will contact the consultant ecologist or the RSPCA for advice and / or to deal with the situation."

2.4.2 Compliance

There were no reports of wild animals becoming trapped within the event perimeter before, during or after the events.

3. Recommendations

3.1 Tree Protection

Protection of the mature oak located close to the northern event boundary and the London planes of the tree-lined park road should be repeated at future events, with mitigation measures as detailed in the event mitigation plan, including exclusion zones, ground protection and mulches.

In addition, the following additional measures and refinements to existing measures are recommended:

- Information on environmental protection measures to be observed during set up and break down periods should be given to stallholders, site staff and contractors prior to the event (e.g., in the form of a briefing note or method statement).
- All temporary tree protection/exclusion zones should be marked out prior to the commencement of delivery and installation of materials and equipment in the pre-event build period and post-event break down period.
- Exclusion zones should be considered for as many trees as practically possible, for the duration of the pre-event build and post-event break down periods.
- Any accidental incursions into exclusion zones should be reported to the event organisers by the incursionary.
- Any accidental damage to trees should be reported to the event organisers by those who caused the damage.
- Any proposed tree works should be notified to the event organisers and authorised by Haringey Council.

3.2 Protection of Shrub Areas

Protection of shrubby areas should be repeated at future events, with mitigation measures as detailed in the event mitigation plan, namely the establishment of exclusion zones by use of temporary fencing.

No additional mitigation measures or refinements to existing measures are considered necessary.

3.3 Disturbance

In our considered opinion, potential light and noise disturbance has been minimised to a reasonable extent given the nature of the event. Given the low likelihood of significant disturbance associated with short duration events at the site (see *Krankbrother Finsbury Park Events August 2024: Ecological Mitigation Plan*, July 2024), this is considered sufficient.

Therefore, no additional mitigation measures or refinements to existing measures are considered necessary.

3.4 Trapping

Measures to address any issues with trapped wild animals should be repeated at future events, as detailed in the event mitigation plan.

No additional mitigation measures or refinements to existing measures are considered necessary.

Appendix 1: Photographs

Figure 1: London plane avenue with tree protection areas marked by barrier tape for duration of pre-event build period and post-event break period

Figure 2: Event materials correctly placed outside of tree protection area

Figure 3: Mature oak with tree protection area marked by temporary fencing for duration of event, with materials placed outside

Site Visit Report – Krank Brothers Event

Location: Finsbury Park
Event Dates: July-Aug 2024
Report Prepared by: Nature Conservation Officer [NCO]
Date of Report: 20241003

Objective of Visit:

To assess the event set-up, performance, and clean-up, with observations on park impact and safety. The primary focus was on monitoring the 3m tree protection zones agreed in the contracts and advising on any additional measures to protect the park's environment and ensure public safety.

Weather Conditions: Favourable throughout the entire events duration.

Event Setup Observations:

Overall Rating: Satisfactory

- **General Setup:**
  The event setup, including staging, tents, barriers, and equipment, was well-organized. Vehicle track matting and fencing were appropriately placed, ensuring there was no encroachment or damage to park trees. There was no visible storage of materials or chemicals near trees, and no spillage was observed.
- **Ground Protection:**
  The root protection areas (RPA) were well measured and maintained. Ground protection mats were laid out where needed, particularly for vehicles on and off the carriageway. The event adhered to the agreed protection zones, with bark chipping applied around trees to prevent soil compaction.
- **Security and Signage:**
  Event security was visible and effective, with appropriate signage in place. Entry and exit points were well managed, and all staff worked in a safe manner, communicating effectively. Parks event staff were on-site to monitor compliance with park regulations.
- **Compliance with Regulations:**
  Compliance with park regulations, particularly those protecting trees and green spaces, was satisfactory.

Photos Taken: Yes (Oak tree photos available on request).

During Event Performance Observations:

Overall Rating: Satisfactory

- Crowd Control:
  Entry and exit points were efficiently managed by event security, and there were no reported issues related to crowd behaviour.
- Impact on Park Facilities:
  Litter levels were controlled. Parks event staff continued to monitor the event to ensure adherence to park guidelines.

Photos Taken: Yes (available on request).

Incident Report:

- Plane Tree Limb Incident:
  During the event, a limb from a Plane tree fell, striking an event attendee.

Post-Event Site Clearance Observations:

Overall Rating: Satisfactory

- Clean-up Efficiency:
  The clean-up crew performed efficiently, with no major debris left behind. All equipment was removed as per the event requirements.
- Park Damage:
  There was **minor damage** to the park, including vehicle tracks and slight damage to a tree. No significant disruptions or long-term damage were observed.

Summary & Recommendations:

Overall Event Impact: Satisfactory

- Park Impact:
  The event had a minimal impact on the park, with minor damage reported. Security, crowd control, and compliance with regulations were all satisfactory.
- Safety Concerns:
  The incident involving the Plane tree limb is concerning and highlights the need for ongoing tree health inspections, particularly before and after major events.

Recommendations:

- Park Restoration:
  Given the minimal damage, the need for park restoration is negligible, but some areas may benefit from routine mulching and improved soil aeration.

- **Future Event Planning:**
    - Conduct regular tree inspections, especially around event zones, to assess tree health and prevent incidents like falling limbs.
    - Introduce barriers around trees to prevent crowds from gathering under them during events.
    - Consider adding composted mulch around tree bases to protect roots and improve the growing environment.
    - Assess pathogen risks and notifiable pests to trees, particularly in high-traffic areas.
    - Weather Assessment: Contingency plan for adverse weather conditions.

Conclusion: Minor impact on the park with areas for improvement regarding tree safety. Further steps should be taken to mitigate risks related to tree health in future events.

Appendices:

Photos: Relevant images from each phase of the visit (setup, during, and post-event available on request).

Air Quality Monitoring
Post 2024 Finsbury Park Event Season

The following briefing accompanies the Excel spreadsheet that provides a summary table of the air quality (AQ) data captured within Finsbury Park during the 2024 summer event season. The table is broken down into pre-event season background, event season, and post event season background for each monitor and pollutant (NO2, PM10, PM2.5).

Context

'Air Quality' refers to the air around us and how many pollutants (harmful chemicals, particles or substances) it contains.

The two main pollutants of concern that the council monitor are:

- Particulate Matter (PM 10 or 2.5) – tiny bits of solid material suspended in the air and composed of a range of substances. Sizes range from <10µm to <2.5µm respectively.
- Nitrogen Dioxide (NO_2) – one of a group of gases referred to as Nitrogen Oxides (NOx)

To monitor these pollutants of concern, two types of monitors are used:

- Continuous monitors – these are most accurate and can provide hourly data
- Passive Diffusion tubes – these provide monthly readings of NOx

While diffusion tubes can be more widely deployed and provide trends over a larger area, they are not as accurate, do not provide hourly data and can only monitor one pollutant at a time. Therefore, indicative automative monitors have been deployed strategically around Finsbury Park to target high footfall, and key event areas.

The relevant exceedance threshold values for the above pollutants are as follows:

NO_2 - the Air Quality Standards Regulations (2010) require that the annual mean concentration of NO_2 must not exceed 40 µg/m^3 and that there should be no more than 18 exceedances of the hourly mean limit value (concentrations above 200 µg/m^3) in a single year.

PM_{10} - the Air Quality Standards Regulations (2010) require that the annual mean concentration of PM_{10} must not exceed 40 µg/m^3 and that there should be no more than 35 exceedances of the 24 hour mean limit value (concentrations above 50 µg/m^3) in a single year.

$PM_{2.5}$ - the Air Quality Standards Regulations (2010) require that the annual mean concentration of $PM_{2.5}$ must not exceed 20 µg/m^3. The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023) require that in England by the end of 2040, annual mean concentration of $PM_{2.5}$ must not exceed 10 µg/m^3. While these are the UK Air Quality Standards, there is no concentration for PM2.5 which is considered 'safe'.

Air quality varies naturally over time due to a variety of factors, including seasonal variations, weather and pollutant source. It is therefore important to look at trends over a longer period of time, ideally for at least a year to accurately compare results with the Air Quality Objectives.

Monitors in Finsbury Park

Indicative automative monitors were initially installed at 4 key locations within Finsbury Park between July and September 2023. They were then removed from site to be collaborated and reinstalled in the park in May 2024.

All but one monitor (FP/05) were installed and operating in the park for two periods – 26 July to 20 September 2023 and 14 May to 25 June 2024. These periods are referred to as the background monitoring periods as no major events were taking place.

A fifth location (FP/05) was identified, however due to supply issues, this was only installed on the 15 July 2024, during the July event de-rig week.

During operation, it was found that one of the monitors (FP/04) had not only been placed too close to Seven Sisters Road but had a faulty sensor and wasn't recording PM readings. Therefore, the replacement monitor was relocated further into the park, where it currently sits in between the reservoir and carriageway. This was installed on the 19 July 2024.

Locations identified are:

- FP/01: Carriageway close to skate plaza - main through route for most traffic associated with Festival Republic event
- FP/02: McKenzie Pavilion - quieter part of the park during the event season, and close to play area
- FP/03: New River Path - area undisturbed during Festival Republic events, but key location where most traffic associated with Krank Events passes
- FP/04: Reservoir - in the middle of the Festival Republic event area, close to food traders located on Reservoir. Area passed closely by vehicles associated with Krank Events.
- FP/05: Track - highest point within the park and outside of both Festival Republic and Krank Events.
- 

What They Tell Us

- During the periods of background monitoring within the park (dates detailed above), average NO_2 concentrations recorded at location FP/04 exceeded the annual NO_2 air quality objective. This was in part due to the monitor being located adjacent to Seven Sisters Road and therefore directly influenced by vehicular traffic pollution sources. This monitor was subsequently re-located further away from the road within the park to minimise this influence.

- Apart from FP/04 (mentioned above) all monitors recorded average pollutant concentrations below their relevant air quality objective thresholds during background monitoring.

- During the Festival Republic build, main events and derigging process, the annual NO_2 air quality objective threshold was exceeded at locations FP/01 and FP/04. As explained above, FP/04 was at that time still located on Seven Sisters Road, which could have been an influencing factor of the higher readings. FP/01 is located on the main carriageway, and through route of the park within the hired space.

- Location FP/01 continued to record exceedances of the annual NO_2 air quality objective during the Krank Events build, main events and derigging process. The continuation of these levels could also have been affected by the operation of the funfair, which was in the park during the August period, and was located by Finsbury Park gate.

- NO_2 exceedances were also identified at FP/03 during the Krank Events main events and derigging process. This is the monitor located closest to the Krank Events.

- While there were no exceedances of the PM10 annual objective at any of the monitoring locations, there was a singular marginal exceedance of the PM2.5 annual objective at FP/02.

- When analysing the post-event season background monitoring, average pollutant concentrations were mostly in-line with the pre-event season background monitoring period. However, average NO_2 concentrations at FP/01 continue to exceed the annual air quality objective. As air quality varies naturally due to seasonal variations and weather, further monitoring needs to be conducted to understand long term pollution trends.

- We have also taken data from our Defra Reference monitoring stations. The Wood Green site (HG005) is a roadside location and Priory Park (HG4) is an Urban Background location. These locations have been chosen because of their locations and pollutants measured. Pollutant concentrations at these sites during the pre-event and post-event background periods are broadly in-line with the measurements taken from Finsbury Park.

- Pollutant concentrations during festival builds, main events and de-rig are generally lower at both Defra Reference stations than the measurements taken from Finsbury Park.

Next Steps

As mentioned above, the monitors need to be in situ for a longer period to enable officers to get a much clearer picture of air quality levels in the park over a year.

However, there is clear indication, and not an unexpected one, that the Events and their associated increase in use of vehicles and internal combustion generators within the park has had an impact on the local air quality.

Therefore, further analysis and discussions need to happen between the council and hirers to determine a long-term action plan to look at ways to prevent the deterioration of local air quality, particularly focusing on the areas that recorded higher readings at key points within the park.

- Talks are already underway with Festival Republic to install mains power to the site, which should have a significant impact on increasing air quality, due to the lesser reliance on generators. Other improvements may include: Requiring a percentage of the vehicles used in the build/de-rigging process to be hybrid or electric.
- Consolidating vehicle trips to ensure event traffic is kept to a minimum.
- Ensuring vehicles are not idling unnecessarily.
- Using Ecotricity batteries (or similar) as a source of renewable power. This initiative has already been successful at other festivals including: WOMAD, Glastonbury and Bristol. (Grid Faeries x Ecotricity | Ecotricity).

Finsbury Park - AQ Data

		Average air pollutant concentrations recorded during each time period (µg/m3)												
		Background - No events	Festival Republic Build	Major Events	Build Week	Wireless Festival	Derig	Nothing	Krankbrother Build	Large Events	Dark Week	Large Events	Derig	Background - Post Event Season
Monitor Location	Pollutant	26th July - 20th September '23 & 14th May - 25th June '24	26th June – 4th July	5th – 7th July	8th – 11th July	12th – 14th July	15th – 19th July	20th – 24th July	25th – 1st August	2nd – 4th August	5th – 9th August	10th – 11th August	12th – 16th August	17th - 10th September
FP/01	NO2	34.0	**51.9**	**56.2**	**51.5**	**43.2**	**63.5**	**44.5**	**46.1**	**49.7**	**45.5**	**49.9**	**46.7**	**47.6**
	PM10	15.4	16.2	9.9	12.2	15.9	16.5	13.4	16.7	18.7	13.0	14.0	13.9	15.6
	PM2.5	8.7	8.55	5.1	6.6	8.9	9.2	7.2	9.2	**10.6**	6.8	7.5	7.3	9.0
FP/02	NO2	18.7	24.8	38.6	37.8	28.6	39.5	26.7	31.1	34.4	29.6	34.3	34.5	29.2
	PM10	15.2	15.7	9.6	11.6	14.4	15.4	13.2	16.4	18.3	13.0	14.1	13.7	15.7
	PM2.5	8.5	8.32	5.0	6.3	7.8	8.6	7.1	9.1	**10.4**	6.9	7.6	7.3	9.1
FP/03	NO2	31.1	32.9	27.2	32.0	25.5	39.0	30.4	37.7	**40.7**	35.5	37.6	**41.1**	32.0
	PM10	16.3	16.0	9.0	11.5	14.6	15.9	13.5	16.9	19.2	13.2	14.6	14.1	16.5
	PM2.5	9.4	8.6	4.6	6.3	8.0	9.0	7.4	9.5	**11.1**	7.1	8.1	7.6	9.8
FP/04	NO2	**44.2**	**59.8**	**60.1**	**57.7**	**62.0**	**60.9**	15.6	14.9	15.7	13.2	14.6	15.6	16.7
	PM10	14.9	**	**	**	**	**	6.9	9.7	12.7	5.8	7.0	6.0	12.9
	PM2.5	8.4	**	**	**	**	**	4.1	6.1	7.2	2.8	3.8	3.4	7.2
FP/05	NO2	*	*	*	*	*	16.4	14.8	16.7	17.0	16.7	18.7	18.5	16.5
	PM10	*	*	*	*	*	9.7	7.6	10.8	13.0	6.0	7.3	6.2	13.2
	PM2.5	*	*	*	*	*	6.3	4.6	6.9	7.4	3.0	4.0	3.6	7.3

*Monitor was not in place during this time frame and therefore no data was recorded.

**Monitor experienced a sensor fault, resulting in data loss.

Exceedances of the NO2 annual mean Air Quality Objective of 40 µg/m3 are shown in **bold**.

Exceedances of the PM2.5 annual mean Air Quality Objective of 10 µg/m3 are shown in **bold.**

Wider Borough - AQ Data

		Average air pollutant concentrations recorded during each time period (µg/m3)												
		Background - No events	Festival Republic Build	Major Events	Build Week	Wireless Festival	Derig	Nothing	Krankbrother Build	Large Events	Dark Week	Large Events	Derig	Background - Post Event Season
Monitor Location	Pollutant	26th July - 20th September '23 & 14th May - 25th June '24	26th June – 4th July	5th – 7th July	8th – 11th July	12th – 14th July	15th – 19th July	20th – 24th July	25th – 1st August	2nd – 4th August	5th – 9th August	10th – 11th August	12th – 16th August	17th - 10th September
Wood Green (HG005)	NO2	**48.0**	**41.3**	29.2	29.2	36.8	**61.3**	35.3	**50.2**	**44.2**	31.9	39.8	**44.9**	**44.4**
	PM10	13.9	13.7	7.3	7.3	10.9	14.3	10.4	13.0	15.0	8.2	10.0	9.9	12.9
	PM2.5	8.3	7.5	4.2	4.2	6.6	7.9	6.4	7.8	10.8	5.0	6.3	5.5	9.1
Haringey Priory Park (HG4)	NO2	31.1	7.7	5.5	8.9	6.1	13.2	6.4	10.4	8.1	6.5	8.9	10.7	10.0
	PM10	***	***	***	***	***	***	***	***	***	***	***	***	***
	PM2.5	***	***	***	***	***	***	***	***	***	***	***	***	***

***Sensor is not available at this location

Exceedances of the NO2 annual mean Air Quality Objective of 40 µg/m3 are shown in **bold**.