



# Ibiza Orchestra Experience and Sausage and Cider Festival – Cambridge 2024

## Sound Control Post-Event Report

### Live Tour Promotions Limited

Revision 0

16 August 2024

Role	Name	Position	Signature	Date
Author	Rupert Burton BSc (Hons) MIOA	Director		16/08/2024
Reviewer	Robert Miller BSc (Hons) MIOA	Director		16/08/2024

Revision	Date	Reason
0	16/08/2024	Issue.

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## Contents

1	Introduction .....	1
1.1	Appointment .....	1
1.2	About F1 Acoustics Company Limited .....	1
2	Off-site Music Noise Level Limits .....	2
3	Site, Environs and Details of the Event .....	3
3.1	Site Location.....	3
3.2	Ibiza Orchestra Experience and Sausage and Cider Festival, Cambridge 2024 .....	3
4	Measured Noise Levels .....	4
4.1	Equipment.....	4
4.2	Staffing .....	4
4.3	On-site Measurements .....	4
4.4	Off-site Measurements .....	4
5	Complaints .....	6

## Tables

Table 2.1: Music Noise Level Limits

## Figures

Figure 1: Site Location and Nearest NSR

Figure 2: Site Plan

## Appendices

Appendix A: Glossary of Acoustic Terms

Appendix B: On-site Music Noise Level Monitoring Results

Appendix C: Off-site Music Noise Level Monitoring Results

## 1 Introduction

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### 1.1 Appointment

1.1.1 F1 Acoustics Company Limited (F1AC) was appointed by Live Tour Promotions Limited (LTPL) to provide sound control and management for the Ibiza Orchestra Experience and Sausage and Cider Festival events held on Friday 2<sup>nd</sup> August and Saturday 3<sup>rd</sup> August 2024 at Cambridge Rugby Club, Ellgia Fields, Granchester Road, Cambridge, CB3 9ED.

1.1.2 This report details the music noise level (MNL) criteria proposed in the Noise Management Plan (NMP); a summary of the on-site and off-site noise levels measured throughout the event; actions taken as a result of the measurements; complaints received; complaint investigation measurements; and any actions taken as a result of complaint investigation.

### 1.2 About F1 Acoustics Company Limited

1.2.1 F1AC are specialists in event and festival sound control and have provided services for festivals including Glastonbury, Boomtown, Southwest Four, Leeds, Latitude and GALA Festival plus numerous other single stage and multi-stage events across the UK. We have a combined experience of over 30 years providing high quality sound control services and all of our Consultants are Members of the Institute of Acoustics. As well as entertainment sound control the company deals with the whole range of acoustics and noise issues and our staff have presented expert testimony at planning and licencing hearings as well as being accustomed to liaising with Local Authority Officers regarding noise issues.

1.2.2 A glossary of acoustic terms is provided in Appendix A to assist the reader.

## 2 Off-site Music Noise Level Limits

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2.1.1 The off-site MNL limits are discussed in detail in the NMP and are reproduced in Table 2.1 below.

**Table 2.1: Target Music Noise Level Limits**

Location	Daytime 14:00 to 23:00
	Broadband $L_{Aeq,T}$ , dB
Noise monitoring location representative of a noise sensitive premises (free-field)	65 (T = 15 min)

## 3 Site, Environs and Details of the Event

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### 3.1 Site Location

- 3.1.1 The event site is located at Cambridge Rugby Club, Ellgia Fields, Grantchester Road, Cambridge, CB3 9ED on the outskirts of Cambridge.
- 3.1.2 The character of the event site and surrounding area is semi-rural and suburban with the noise environment including road traffic noise from the M11, A603 and surrounding local roads.
- 3.1.3 The nearest noise sensitive premises to the event site are located on Fulbrook Road and Selwyn Road to the north and Millington Road and South Green Road to the east.
- 3.1.4 A plan showing the event site location and surrounding area is included as Figure 1.

### 3.2 Ibiza Orchestra Experience and Sausage and Cider Festival, Cambridge 2024

- 3.2.1 The Ibiza Orchestra Experience event was held on Friday 2<sup>nd</sup> August 2024 from 18:00 to 23:00; and the Sausage and Cider Festival will be held on Saturday 3<sup>rd</sup> August 2024 from 14:00 to 23:00.
- 3.2.2 A plan showing the site layout including the location and orientation of the stage is included as Figure 2.

## 4 Measured Noise Levels

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### 4.1 Equipment

4.1.1 Off-site noise levels were measured with a Rion NL-52 (F1AC-069) Class 1 sound level meter (SLM) with third-octave frequency band measurement capability. The SLM was checked for calibration with a Rion NC-75 (F1AC-070) Class 1 calibrator, at the beginning and end of the monitoring period. No significant deviation of the calibration level was observed.

4.1.2 The MNL at the Main Stage front of house position were continuously monitored using an NTi Audio XL2 (F1AC-022) Class 2 sound level SLM. The SLM was connected to Noise Network: LIVE a real-time visual display enabling the sound engineer to actively monitor the stage noise levels.

### 4.2 Staffing

4.2.1 The event sound control including the off-site noise monitoring was carried out by James Claydon an experienced and qualified sound control consultant.

### 4.3 On-site Measurements

4.3.1 The MNL were monitored at the stage throughout the event. The results of the on-site MNL monitoring are presented in Appendix B.

### 4.4 Off-site Measurements

4.4.1 Off-site measurements of the MNL were made at the monitoring positions proposed in the NMP throughout the event. A plan showing the noise monitoring positions is included as Figure 1.

4.4.2 The off-site MNL measurements and observations for the two event days are provided in Appendix C.

## **Friday 2<sup>nd</sup> August 2024**

4.4.3 The meteorological conditions during the event on Friday 2<sup>nd</sup> August 2024 were fair with no periods of precipitation. There was a westerly wind and temperatures of 18 to 26 °C.

4.4.4 The measurements for Friday 2<sup>nd</sup> August 2024 show that the measured noise levels at the monitoring positions were below the MNL limits set in the NMP.

## **Saturday 3<sup>rd</sup> August 2024**

4.4.5 The meteorological conditions during the event on Saturday 3<sup>rd</sup> August 2024 were fair and partly cloudy at times with no periods of precipitation. There was a westerly and north-westerly wind from and temperatures of 15 to 23 °C.

4.4.6 The measurements for Saturday 3<sup>rd</sup> August 2024 show that the measured noise levels at the monitoring positions were below the MNL limits set in the NMP.

## 5 Complaints

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- 5.1.1 There were no complaints registered via the community hotline during the event and at the time of writing F1 Acoustics has not been made aware of any complaints received post event.







**Legend**

-  Main Stage
-  Monitoring Positions
-  Event Site

### Music Noise Monitoring Positions

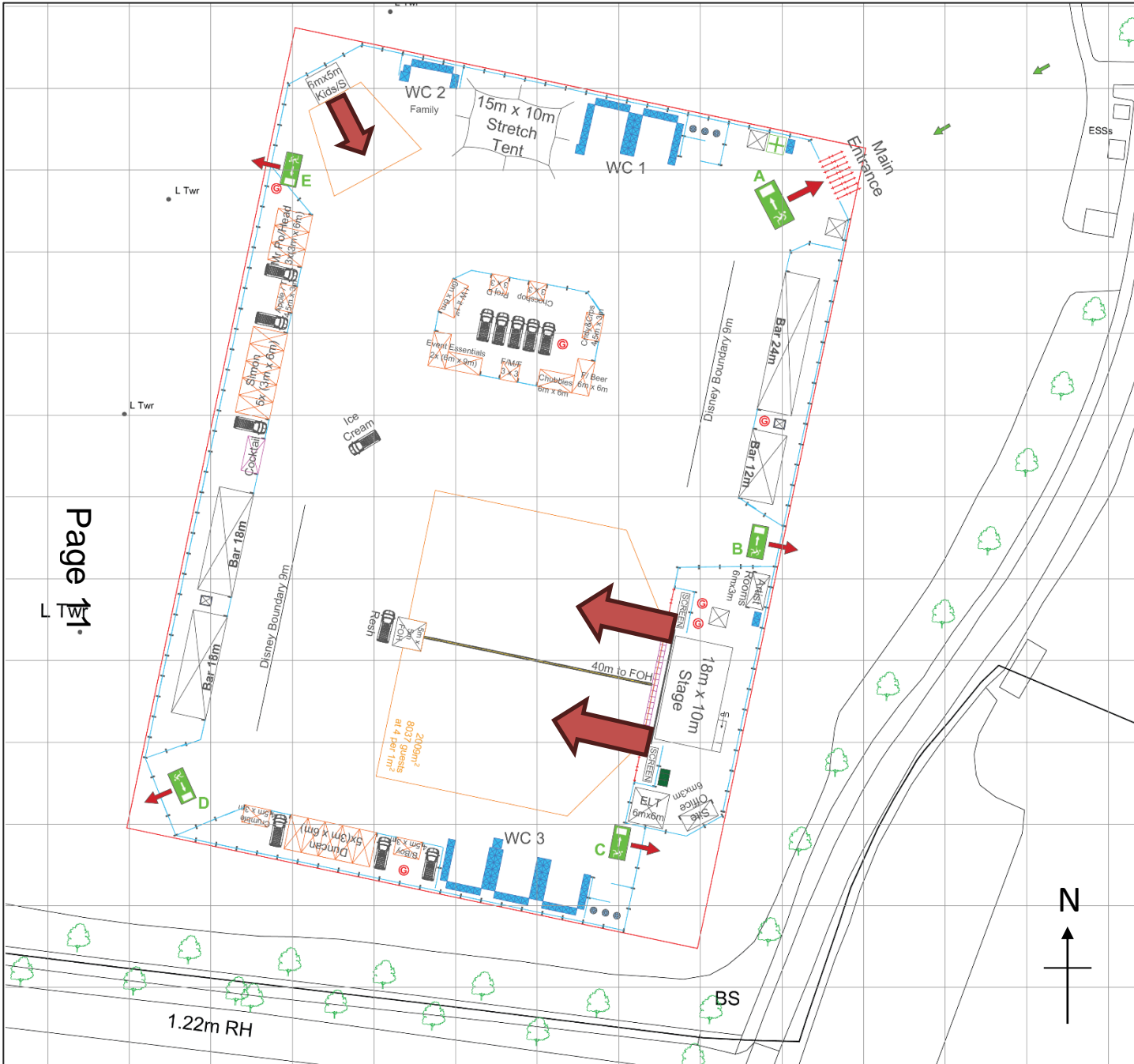
MP1 – Rear of properties on Fulbrooke Road  
 MP2 – Milington Road / Kings Road  
 MP3 – Broadway, Grantchester

REV	DATE	D	R	DESCRIPTION
0	16/08/2024	RB	RM	Issue


## F1:Acoustics

38 Briton Hill Road, South Croydon, Surrey, CR2 0JL  
 info@f1acoustics.com +44 1227 770 890 f1acoustics.com

PROJECT:	Ibiza Orchestra Experience and Sausage & Cider Festival - Cambridge 2024 – PER
CLIENT:	Live Tour Promotions Limited
TITLE:	Site Location and Nearest Noise Sensitive Receptors
DATE:	16/08/2024
REVISION:	0
SCALE:	Scale as shown.
DRAWING NO:	1957/LTP-Cambridge2024-PER/1/0
FIGURE NO:	1
DRAWN BY:	Rupert Burton
REVIEWED BY:	Robert Miller



**Legend**

 Sound system location and direction

REV	DATE	D	R	DESCRIPTION
0	16/08/2024	RB	RM	Issue

**F1:Acoustics**  
 38 Briton Hill Road, South Croydon, Surrey, CR2 0JL  
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PROJECT:	Ibiza Orchestra Experience and Sausage & Cider Festival - Cambridge 2024 – PER
CLIENT:	Live Tour Promotions Limited
TITLE:	Site Plan
DATE:	16/08/2024
REVISION:	0
SCALE:	Not to scale.
DRAWING NO:	1957/LTP-Cambridge2024-PER/2/0
FIGURE NO:	2
DRAWN BY:	Rupert Burton
REVIEWED BY:	Robert Miller

## **Appendices**

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### Glossary of Acoustic Terms

Noise is defined as unwanted sound. The range of audible sound is from 0 dB to 140 dB. The frequency response of the ear is usually taken to be about 18 Hz (number of oscillations per second) to 18,000 Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than at the lower and higher frequencies, and because of this, the low and high frequency component of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most used and which correlates best with the human subjective response to noise is the A-weighting. This is an internationally accepted standard for noise measurements.

The ear can just distinguish a difference in loudness between two noise sources when there is a 3 dB difference between them. Also, when two sound sources of the same noise level are combined the resultant level is 3 dB higher than the single source. When two sounds differ by 10 dB one is said to be twice as loud as the other.

The subjective response to a noise is dependent not only upon the sound pressure level and its frequency, but also its intermittency. Various indices have been developed to try and correlate annoyances with the noise level and its fluctuations. The indices and parameters used in this report are defined below:

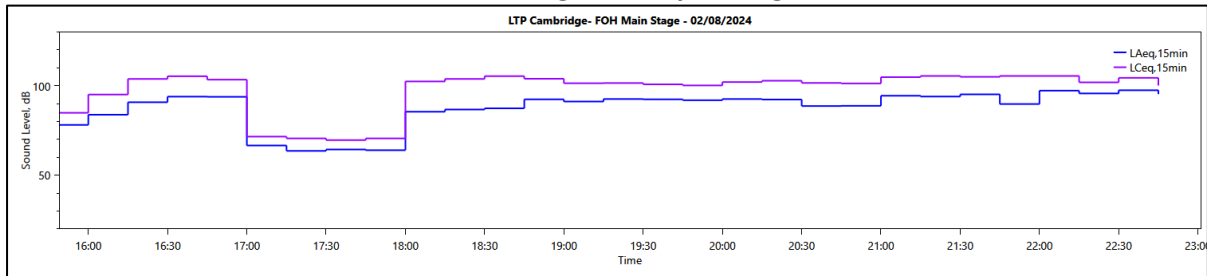
- **Background Noise Level** – The prevailing sound level at a location, measured in terms of the  $L_{A90,T}$ , on an equivalent day and at an equivalent time when no concert or sound checks are taking place.
- **dB(A)** – The A-weighted sound pressure level whereby various frequency components of sound are weighted (equalized) to reflect the way the human ear responds to different frequencies.
- **$L_{Aeq}$**  – The equivalent continuous sound pressure level which at a given location over a given period of time contains the same A-weighted sound pressure level of a steady sound that has the same energy as the fluctuating sound under investigation.
- **$L_{AN,T}$**  – The A-weighted sound level exceeded for N% of the measurement period (T).
- **Music Noise Level (MNL)** – The  $L_{Aeq}$  of the music noise measured at a particular location.
- **Noise Consultant** – A person given responsibility by the organiser of the event for monitoring noise levels in accordance with the prevailing conditions, and who has the ability and authority to make decisions and implement changes in noise level during the event.



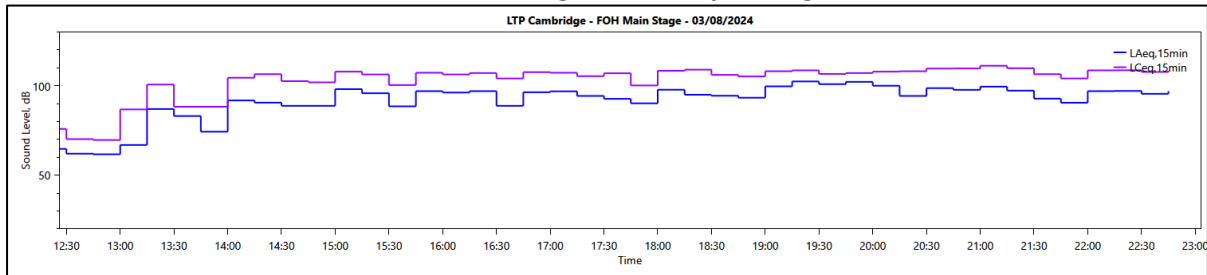
## Appendix B

### On-site Music Noise Level Monitoring Results

#### Measured Music Noise Levels at the Main Stage – Friday 2<sup>nd</sup> August 2024



#### Measured Music Noise Levels at the Main Stage – Saturday 3<sup>rd</sup> August 2024



### **Off-site Music Noise Level Monitoring Results**

Table C.1: Attended Off-site Music Noise Level Measurements Friday 2nd August 2024

Start Time	Location	Duration (T)	Broadband	Broadband	Third Octave Band $L_{\text{Aeq,T}} \text{ dB}$					Aural Observations	
			$L_{\text{Aeq,T}} \text{ dB}$	$L_{\text{Ceq,T}} \text{ dB}$	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	Music Noise and Actions	Environmental Noise
16:20	MP3 – Broadway, Grantchester	00:05:29	50.4	60.5	51.9	50.6	44.8	39.3	39.2	Music not audible. (music rehearsal on main stage)	Other noise sources included road traffic (dominant).
16:40	MP2 – Milington Road / Kings Road	00:05:00	52.9	66.4	58.6	63.8	60.0	58.1	53.5	Music audible full range (music rehearsal on main stage).	Other noise sources included wind in the trees.
16:51	MP1 – Rear of properties on Fulbrooke Road	00:05:00	61.1	69.8	52.6	55.0	64.4	62.5	62.9	Music audible full range (music rehearsal on main stage).	Other noise sources included wind in the trees, car passing and people talking in car park.
18:21	MP1 – Rear of properties on Fulbrooke Road	00:05:00	53.2	67.7	55.5	63.9	61.2	61.6	58.9	Music audible full range.	Other noise sources included wind in the trees and people talking in carpark.
18:54	MP1 – Rear of properties on Fulbrooke Road	00:05:00	58.8	69.3	50.3	62.0	65.6	63.3	59.2	Music audible full range.	Other noise sources included wind in the trees and people talking in field.
19:10	MP3 – Broadway, Grantchester	00:05:00	51.2	61.0	55.7	54.3	53.0	48.0	47.4	Music not audible.	Other noise sources included wind in the trees, local passing traffic, distant road noise and birds tweeting.
19:25	MP3 – Broadway, Grantchester	00:05:00	55.5	68.7	51.3	64.5	64.0	63.0	56.7	Music audible full range.	Other noise sources included wind in the trees. Lady asking for directions paused out.
19:38	MP1 – Rear of properties on Fulbrooke Road	00:05:00	59.3	70.7	67.8	67.1	61.4	60.5	55.5	Music audible full range.	Other noise sources included wind in the trees and people talking in field.
20:14	MP1 – Rear of properties on Fulbrooke Road	00:05:00	60.3	69.4	59.7	63.1	66.2	59.9	57.0	Music audible full range plus MC.	Other noise sources included wind in the trees.
20:46	MP3 – Broadway, Grantchester	00:05:00	47.1	55.3	44.0	51.2	48.6	40.8	41.0	Music not audible.	Other noise sources included distant road noise and local passing traffic.
20:58	MP2 – Milington Road / Kings Road	00:05:00	55.8	67.6	58.6	60.5	63.9	61.5	55.9	Music and crowd chatter audible.	Other noise sources included distant helicopter and a car passing very close to sound level meter.
21:13	MP1 – Rear of properties on Fulbrooke Road	00:05:00	61.4	68.1	50.4	58.6	64.9	59.4	55.2	Music audible full range.	Other noise sources included distant road noise and people chatting in park.
21:44	MP1 – Rear of properties on Fulbrooke Road	00:05:00	57.3	67.9	61.7	62.4	62.5	59.0	57.8	Music audible full range.	Other noise sources included a high aeroplane and a car driving past meter in carpark.
22:05	MP3 – Broadway, Grantchester	00:05:00	50.9	59.9	53.5	57.2	48.7	46.9	48.8	Music not audible.	Other noise sources included local traffic (dominant) and distant road traffic (just audible).
22:19	MP2 – Milington Road / Kings Road	00:05:00	57.8	66.3	53.2	58.8	62.7	59.5	53.6	Music audible full range and crowd cheering.	Other noise sources included a drone in nearby field.
22:37	MP1 – Rear of properties on Fulbrooke Road	00:15:00	64.2	68.1	58.1	58.3	60.2	56.1	55.6	Music and crowd cheering audible.	Other noise sources included lots of people chatting in carpark. Group shouting while walking past meter paused out.



Table C.2: Attended Off-site Music Noise Level Measurements Saturday 3rd August 2024

Start Time	Location	Duration (T)	Broadband	Broadband	Third Octave Band $L_{\text{Aeq,T}}$ dB					Aural Observations	
			$L_{\text{Aeq,T}}$ dB	$L_{\text{Ceq,T}}$ dB	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	Music Noise and Actions	Environmental Noise
14:08	MP3 – Broadway, Grantchester	00:05:00	51.8	62.9	55.0	59.1	57.2	47.3	46.7	Music intermittently barely audible.	Other noise sources included local road traffic, wind in the trees and low flying vintage aeroplane.
14:22	MP2 – Millington Road / Kings Road	00:05:00	53.1	71.0	53.4	61.7	63.9	69.4	58.8	Music audible.	Other noise sources included wind in the trees and kids playing in garden nearby.
14:39	MP1 – Rear of properties on Fulbrooke Road	00:05:00	53.1	64.3	51.0	56.6	57.6	54.0	58.3	Music audible.	Other noise sources included low vintage aeroplanes and cyclists on gravel.
15:10	MP1 – Rear of properties on Fulbrooke Road	00:05:00	55.1	69.0	55.7	62.0	62.5	59.3	63.5	Music audible full range.	Other noise sources included low vintage aeroplanes, cyclists and people on gravel and wind in the trees.
16:01	MP3 – Broadway, Grantchester	00:05:00	49.1	59.3	50.3	53.9	52.1	44.5	43.0	Bass intermittently barely audible.	Other noise sources included local passing traffic, birds and distant aeroplanes.
16:16	MP2 – Millington Road / Kings Road	00:05:00	55.6	66.9	52.0	60.7	61.8	61.3	53.8	Music audible, crowd cheering.	Other noise sources included wind in the trees and birds.
17:00	MP1 – Rear of properties on Fulbrooke Road	00:05:00	55.9	70.2	61.4	62.5	64.9	60.9	64.7	Music audible full range.	Other noise sources included wind in the trees, birds, couple talking walking past and distant motorcycle.
17:38	MP3 – Broadway, Grantchester	00:05:00	49.0	55.5	48.5	49.8	42.4	38.2	37.9	Music intermittently barely audible.	Other noise sources included distant road traffic, local passing traffic, wind in the trees and birds.
18:06	MP2 – Millington Road / Kings Road	00:05:00	57.3	68.0	54.6	61.9	61.7	63.0	55.5	Music audible full range.	Other noise sources included wind in the trees.
18:34	MP1 – Rear of properties on Fulbrooke Road	00:05:00	57.5	69.5	53.9	61.8	66.3	60.8	61.2	Music audible full range.	Other noise sources included wind in the trees, birds and child shouting.
19:25	MP1 – Rear of properties on Fulbrooke Road	00:05:00	62.5	69.4	63.1	63.9	62.1	57.4	55.5	Music audible full range.	Other noise sources included wind in the trees.
19:43	MP3 – Broadway, Grantchester	00:05:00	54.7	57.9	49.4	47.9	41.1	40.0	38.9	Music audible.	Other noise sources included birds and passing car.
20:37	MP1 – Rear of properties on Fulbrooke Road	00:05:00	60.6	69.6	60.4	60.6	64.3	61.0	63.1	Music audible.	Other noise sources included cyclists on gravel and people talking nearby.
20:57	MP3 – Broadway, Grantchester	00:05:00	54.0	61.0	50.1	52.4	51.3	47.0	50.2	Music audible.	Other noise sources included birds tweeting and local traffic.
21:11	MP2 – Millington Road / Kings Road	00:05:00	57.3	70.9	60.4	65.8	65.4	66.5	59.4	Music audible.	Other noise sources included cyclist riding past and birds tweeting.
21:43	MP1 – Rear of properties on Fulbrooke Road	00:05:00	60.4	64.2	52.1	56.2	57.5	54.6	54.4	Music audible full range.	Other noise sources included lots of groups of people talking and cyclists.
22:08	MP3 – Broadway, Grantchester	00:05:00	51.5	59.8	50.2	49.1	46.7	47.9	52.3	Music audible.	Other noise sources included local passing traffic and public talking nearby.
22:24	MP2 – Millington Road / Kings Road	00:05:00	52.6	67.7	53.6	63.1	63.7	61.5	57.0	Music audible full range.	Other noise sources included distant road noise and groups of people talking/shouting in distance.
22:43	MP1 – Rear of properties on Fulbrooke Road	00:15:00	61.7	69.5	56.2	59.6	62.9	59.2	63.1	Music audible full range.	Other noise sources included lots of groups of people talking and cyclists on gravel.

Page 17

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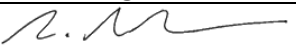

## Cambridge Day Festival 2025

### Noise Management Plan

#### London Road Audio Services Ltd

Revision 0

21 January 2025

Role	Name	Position	Signature	Date
Author	Rupert Burton BSc (Hons) MIOA	Director		21/01/2025
Reviewer	Robert Miller BSc (Hons) MIOA	Director		21/01/2025

Revision	Date	Reason
0	21/01/2025	Issue.

The preparation of this report by F1 Acoustics Company Limited has been undertaken within the terms of the Brief using all reasonable skill and care. F1 Acoustics Company Limited accepts no responsibility for data provided by other bodies and no legal liability arising from the use by other persons of data or opinions contained in this report. Publication of this report for any reason other than its intended and agreed purpose is strictly prohibited without written permission from F1 Acoustics Company Limited and the named Client.

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This noise management plan is Commercial in Confidence. Any disclosure, in part or in full, will lead to damage of F1 Acoustics Company Limited's 'trade secrets' including, but not limited to, specific protocols and procedures on how sound control and noise management is planned and implemented at this event.

## Contents

1	Introduction .....	1
1.1	Appointment .....	1
1.2	About F1 Acoustics Company Limited .....	1
2	Premises Licence, Guidance and Proposed Music Noise Level Limits .....	3
2.1	Premises Licence .....	3
2.2	Code of Practice on Environmental Noise Control at Concerts .....	4
2.3	Proposed Music Noise Level Limits .....	6
3	Site, Environs and Details of the Event .....	7
3.1	Site Location .....	7
3.2	Cambridge Day Festival 2025 .....	7
3.3	Fairgrounds, Traders and Concessions .....	7
4	Sound System Design .....	8
5	Sound Control Procedure .....	9
5.1	Personnel .....	9
5.2	Sound Control Program .....	9

## Tables

Table 5.1: Proposed Music Noise Level Limits

Table 5.2: Target Low Frequency Music Noise Level Criteria

## Figures

Figure 1: Site Location and Nearest Noise Sensitive Receptors

Figure 2: Site Plan

## Appendices

Appendix A: Glossary of Acoustic Terms

## 1 Introduction

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### 1.1 Appointment

- 1.1.1 F1 Acoustics Company Limited (F1AC) has been appointed by London Road Audio Services Ltd (LRASL) to provide sound control and management for the Cambridge Day Festival, to be held on Saturday 5<sup>th</sup> July 2025 at Cambridge Rugby Club, Ellgia Fields, Granchester Road, Cambridge, CB3 9ED.
- 1.1.2 This Noise Management Plan (NMP) contains details of the noise management strategies that will be executed by F1AC on behalf of LRASL. This NMP will ensure that the conditions of the Premises Licence relating to noise are addressed and implemented at all times during the event and that the Licencing Act 2003 objective for the prevention of public nuisance is promoted.
- 1.1.3 This NMP is a “live document” which will be updated as and when the overall event plan develops.

### 1.2 About F1 Acoustics Company Limited

- 1.2.1 F1AC are specialists in event and festival sound control and have provided services for festivals including Glastonbury, Boomtown, Southwest Four, Leeds, Latitude and GALA Festival plus numerous other single stage and multi-stage events across the UK. We have a combined experience of over 30 years providing high quality sound control services and all of our Consultants are Members of the Institute of Acoustics. As well as entertainment sound control the company deals with the whole range of acoustics and noise issues and our staff have presented expert testimony at planning and licencing hearings as well as being accustomed to liaising with Local Authority Officers regarding noise issues.
- 1.2.2 F1AC will use integrating sound level meters capable of measuring in third-octave bands and conforming to the Class 1 specification contained in BS EN 61672-1:2013 for all off-site measurements, with all sound level meters used for on-site monitoring, if required by conditions within the Premises Licence, conforming to the Class 2 specification or better. These sound level meters will be within a two year period of calibration traceable to national standards. All sound level meters will be checked for calibration with an

equivalent or more accurate Class of acoustic calibrator, which is within a two year period of calibration traceable to national standards, before and after each monitoring session.

- 1.2.3 F1AC has used National Guidelines, The Code of Practice on Environmental Noise Control at Concerts (The Noise Council, 1995) and our expert experience in this sector to tailor this Noise Management Plan for the type of event, number of customers, number of stages and location to ensure an achievable protocol is established.

## 2 Premises Licence, Guidance and Proposed Music Noise Level Limits

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### 2.1 Premises Licence

2.1.1 LRASL have applied to Cambridge City Council (CCC) for a Premises Licence for the event. The Premises Licence application is seeking the following permissions relating to music noise:

- Recorded Music (Indoors and Outdoors)
  - Friday 17:00 to 23:00
  - Saturday 12:00 to 23:00
- Live Music (Indoors and Outdoors)
  - Friday 17:00 to 23:00
  - Saturday 12:00 to 23:00
- Performance of Dance (Indoors and Outdoors)
  - Friday 17:00 to 23:00
  - Saturday 12:00 to 23:00

2.1.2 The following conditions relating to noise are proposed to be included on the Premises Licence, if granted:

*“ 41. Attendees will be reminded of the residential location via digital media in advance of the event and clear signage throughout the event site will be used to remind and inform attendees of the proximity of residential areas.*

*42. Noise limits will be agreed with local authority noise management agents and adhered to vigorously. All residents within the area will be advised, by way of a letter drop, of any use of the premises, no less than one month before any event. A contact number will be provided in this letter drop for residents to be able to contact the noise management staff to ensure any complaints can be dealt with in a timely fashion.*

...

*44. Following discussion with Cambridge City Council Environmental Protection team, noise limits will be set in advance. These limits will be implemented throughout the course of the build, de-rig and live dates.*

45. The organisers will monitor on-site dB noise levels and ensure that set noise limits will be adhered to, with regular reading to be taken and recorded.

46. A dedicated festival 'hotline' will be in place for local residents to contact the festival organisers, enabling them to respond to noise disturbance concerns and react accordingly."

## 2.2 Code of Practice on Environmental Noise Control at Concerts

2.2.1 The Code of Practice on Environmental Noise Control at Concerts contains the following relevant guidance regarding the off-site noise limits at the nearest noise sensitive premises:

*"3.1 The music noise levels (MNL) when assessed at the prediction stage or measured during sound checks or concerts should not exceed the guidelines shown in Table 1 at 1 metre from the façade of any noise sensitive premises for events held between the hours of 09.00 and 23.00.*

**Table 1**

<b>Concert days per calendar year, per venue</b>	<b>Venue category</b>	<b>Guideline</b>
1 to 3	Urban Stadia or Arenas	The MNL should not exceed 75 dB(A) over a 15 minute period
1 to 3	Other Urban and Rural Venues	The MNL should not exceed 65 dB(A) over a 15 minute period
4 to 12	All Venues	The MNL should not exceed the background noise level by more than 15 dB(A) over a 15 minute period

**Notes to Table 1**

1. The value used should be the arithmetic average of the hourly LA90 measured over the last four hours of the proposed music event or over the entire period of the proposed music event if scheduled to last for less than four hours.

2. There are many other issues which affect the acceptability of proposed concerts. This code is designed to address the environmental noise issue alone.



3. In locations where individuals may be affected by more than one venue, the impact of all the events should be considered.

4. For those venues where more than three events per calendar year are expected, the frequency and scheduling of the events will affect the level of disturbance. In particular, additional discharges can arise if events occur on more than three consecutive days without a reduction in the permitted MNL.

5. For indoor venues used for up to about 30 events per calendar year an MNL not exceeding the background noise by more than 5 dB(A) over a fifteen minute period is recommended for events finishing no later than 23.00 hours.

6. Account should be taken of the noise impact of other events at a venue. It may be appropriate to reduce the permitted noise from a concert if the other events are noisy.

7. For venues where just one event has been held on one day in any one year, it has been found possible to adopt a higher limit value without causing an unacceptable level of disturbance.

3.2 For events continuing or held between the hours 23.00 and 09.00 the music noise should not be audible within noise-sensitive premises with windows open in a typical manner for ventilation.

#### Notes on Guidelines 3.2

1. The use of inaudibility as a guideline is not universally accepted as an appropriate method of control. References 6 & 7 (Appendix 1) set out the various issues. This guideline is proposed as there is insufficient evidence available to give more precise guidance.

2. Control can be exercised in this situation by limiting the music noise so that it is just audible outside the noise sensitive premises. When that is achieved it can be assumed that the music noise is not audible inside the noise sensitive premises.

3.3 The nature of music events means that these guidelines are best used in the setting of limits prior to the event (see 4.0).

3.4 Assessment of noise in terms of dB(A) is very convenient but it can underestimate the intrusiveness of low frequency noise. Furthermore, low frequency noise can be very noticeable indoors. Thus, even if the dB(A) guideline

*is being met, unreasonable disturbance may be occurring because of the low frequency noise. With certain types of events, therefore, it may be necessary to set an additional criterion in terms of low frequency noise, or apply additional control conditions.*

#### *Notes to Guideline 3.4*

*1. It has been found that it is the frequency imbalance which causes disturbance. Consequently there is less of a problem from the low frequency content of the music noise near to an open air venue than further away.*

*2. Although no precise guidance is available the following may be found helpful (Ref.8): A level up to 70 dB in either of the 63 Hz or 125 Hz octave frequency band is satisfactory; a level of 80 dB or more in either of those octave frequency bands causes significant disturbance.*

*3.5 Complaints may occur simply because people some distance from the event can hear it and that, consequently, they feel the music must be loud even though the guidelines are being met. In fact topographical and climatic conditions can be such that the MNL is lower at locations nearer to the venue.”*

## 2.3 Proposed Music Noise Level Limits

2.3.1 The national guidance document “Code of Practice on Environmental Noise Control at Concerts”, although withdrawn by the Chartered Institute of Environmental Health (CIEH) in 2019 is still the most up to date guidance document available and is still often used in establishing the off-site music noise levels (MNL) for events.

2.3.2 The event site is located within a semi-rural and suburban area. It is therefore proposed to control the MNLs at the Cambridge Day Festival to a MNL of  $L_{Aeq,15min}$  65 dB in accordance with the guidance for 1 to 3 concert days per calendar year, per venue, for other rural and urban venues.

## 3 Site, Environs and Details of the Event

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### 3.1 Site Location

- 3.1.1 The event site is located at Cambridge Rugby Club, Ellgia Fields, Grantchester Road, Cambridge, CB3 9ED on the outskirts of Cambridge.
- 3.1.2 The character of the event site and surrounding area is semi-rural and suburban with the noise environment including road traffic noise from the M11, A603 and surrounding local roads.
- 3.1.3 The nearest noise sensitive premises to the event site are located on Fulbrook Road and Selwyn Road to the north and Millington Road and South Green Road to the east.
- 3.1.4 A plan showing the festival site location and surrounding area is included as Figure 1.

### 3.2 Cambridge Day Festival 2025

#### Event Details

- 3.2.1 The Cambridge Day Festival will be held on Saturday 5<sup>th</sup> July 2025 from 12:00 to 23:00
- 3.2.2 The festival will include an outdoor Main Stage, two smaller Big Top stages and a tented VIP bar area.
- 3.2.3 A plan showing the site layout including the location and orientation of the stages is included as Figure 2.

### 3.3 Fairgrounds, Traders and Concessions

Fairgrounds, traders and concessions will have their sound systems checked before the event opens and operators will be reminded, the event is operating to agreed MNL criteria. The fairgrounds will be monitored throughout the event days and MNLs reduced if they have increased unnecessarily or are causing a disturbance.

## 4 Sound System Design

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- 4.1.1 F1AC will liaise with the appointed sound system supplier to advise on the design of the sound systems to minimise noise impact at nearest noise sensitive premises.
- 4.1.2 The sound systems will have appropriate controls for limiting, adjusting and fine-tuning individual third octave frequency bands. Dynamic equalisation and/or multi band compression should also be available for use by the sound engineer as required.

## 5 Sound Control Procedure

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### 5.1 Personnel

- 5.1.1 To ensure the noise objectives contained within the Premises Licence are achieved, all the steps of the sound control procedure outlined below will be adopted.
- 5.1.2 A team consisting of one Sound Control consultant will be working at the event. Details for the Consultant will be provided to the local authority prior to the event. The Consultant will be contactable at any time during the licence period on the site communication radio and/or by mobile phone.
- 5.1.3 The consultant will liaise with the team of audio engineers based at each of the stages. The audio engineers will work under the instruction of the sound control team and put in to place any required alterations to the sound systems overall or frequency-based output to achieve compliance with the licence conditions. The festival management will be kept updated with regard to the off-site noise levels throughout the event.

### 5.2 Sound Control Program

#### **Pre-event Information**

- 5.2.1 At least one month before the event LRASL will contact local residents of noise sensitive premises in writing detailing the community hotline telephone number, nature, timings of the programmed entertainment and propagation tests for the event.

#### **Event Build and Breakdown**

- 5.2.2 The build and breakdown will occur in the days before and after the event. In order to limit any additional noise experienced by local residents causing a disturbance any build or breakdown activities that are considered noisy will only take place between the hours of 08:00 and 20:00.

#### **Noise Curfew**

- 5.2.3 Noise from the operation of sound systems for regulated entertainment is not permitted before 12:00 and must finish by 23:00. Sound checks using low levels of white/pink noise and clicks for sound system set-up, line checking and time alignment; and music for tuning, propagation tests and sound checks, may take place before these times but not before 10:00. These sound checks will be kept to a minimum.

## **Sound Propagation Tests**

- 5.2.4 Sound propagation tests will occur before the event on the Saturday from 10:00.
- 5.2.5 The sound propagation tests consist of playing music, similar to the programmed artists, through the sound systems and measuring the MNL at fixed monitoring points to be used throughout the event in the front of house (FOH) area, ideally at the mixing position where located FOH. Concurrent off-site measurements at the nearest noise sensitive premises will also be taken. These tests take account of all physical factors (e.g. distance, ground absorption, air absorption and meteorological conditions) such that the on-site operating levels can be adjusted and set to achieve compliance with the off-site licence conditions before the start of the event.

## **Sound Monitoring and Control**

- 5.2.6 LRASL are to inform all relevant parties that F1AC are undertaking the sound control role as part of the premises license requirement and that this role has been appointed and approved by LRASL. F1AC will have ultimate operational control over all the sound levels throughout the event. Therefore, all other parties, including artists, production managers, stage managers, sound engineers and event managers will be instructed not to increase any sound levels unless specifically agreed by the consultant responsible for sound control.
- 5.2.7 Off-site noise levels will be measured using Class 1 specification integrating sound level meters capable of measuring third-octave bands. Octave band MNL measurements will be regularly taken at proposed monitoring positions as shown in Figure 1. The monitoring positions identified with the highest MNLs will be monitored more frequently than those with a lower MNL. Additional monitoring positions may be added during the event if required or if requested by the Local Authority.
- 5.2.8 Where practicable measurements will be taken over a 15-minute period. However, shorter measurement periods may be undertaken to determine compliance to enable measurements to be carried out more locations. It is considered that 5-minute measurements are able to provide a good indication of compliance.
- 5.2.9 If any levels are measured to be above the proposed MNL limits, provided in Table 5.1, the sound engineer at the stage will be instructed to reduce the MNL, until a measurement showing compliance with the limits can be taken. In addition to the

control of the overall sound level, frequency adjustments can also be made to reduce the sound at certain low frequencies, often characterised outside the event as a ‘bass beat’.

**Table 5.1: Proposed Music Noise Level Limits**

Location	Daytime 12:00 to 23:00
	Broadband L <sub>Aeq,T</sub> , dB
Noise monitoring location representative of a noise sensitive premises (free-field)	65 (T = 15 min)

5.2.10 The sound level at the Main Stage will be measured continuously during the event utilising our in-house sound engineer display (Noise Network Live) showing the current sound level and set noise limits. This display will reduce the amount of sound level creep and ensure that the off-site MNL will remain within the MNL criteria at the nearest noise sensitive premises. The MNL limit at the stage can be adjusted throughout the day to adjust for atmospheric or meteorological changes and is prominently displayed to the sound engineer. For all other stages, regular visits by a member of the sound control team will ensure that stages do not unacceptably increase their noise levels and good communication is promoted between the sound control team and sound engineers. With regular visits, we will reduce the amount of sound level creep and ensure that off-site MNL will remain below the MNL limit.

5.2.11 Throughout the event, F1AC will be available to liaise closely with CCC Officers responsible for noise, if they are in attendance. If F1AC is made aware of the MNL approaching the set limits, sound levels at the stage will be reduced where it is considered necessary. Results of the off-site noise monitoring and any related actions will be collated and kept available by F1AC for inspection by the Local Authority at any time during the event.

**Low Frequency Sound Control**

5.2.12 It is acknowledged that low frequency noise has the potential to cause a disturbance at a greater distance than mid and high frequency sound.

5.2.13 The Code of Practice on Environmental Noise Control at Concerts provides guidance on low frequency sound control. Paragraph 3.4 from the guidance states low frequency noise should also be considered separately to minimise the disturbance at noise sensitive premises. Notes on Paragraph 3.4 indicate that the onset of significant

disturbance is between 70 dB and 80 dB (unweighted). Note 1 of Paragraph 3.4 states that it is the frequency imbalance that causes the disturbance and consequently there is less of a problem from the low frequency content of the music noise near to an open-air venue than further away.

- 5.2.14 The frequency imbalance occurs because the distance attenuation of sound is frequency dependent, with lower (bass) frequencies attenuating at a slower rate than higher frequencies. The distance at which this frequency imbalance becomes noticeable is generally between 1 – 2 km.
- 5.2.15 At noise sensitive premises closer to the site than the onset of the frequency imbalance the broadband  $L_{Aeq,15min}$  MNL limits proposed will take in to account the low frequency component of the music noise. At these noise sensitive premises, the music noise will contain the full frequency range without significant imbalance, subsequently controlling the A-weighted limit will also control the low frequency component of the MNL.
- 5.2.16 As a guide, it would be expected in the near-field area surrounding the event site, where the music noise is dominant, that the difference between the broadband A-weighted and C-weighted sound levels ( $L_{Ceq,15min}$  minus  $L_{Aeq,15min}$ ) would be approximately 15 to 20 dB, depending on the genre of music.
- 5.2.17 The assessment of the MNL at the noise sensitive premises will include a subjective assessment for any frequency components or featured elements that may cause significant disturbance (including low frequency music noise). In the event that a significant disturbance is identified, appropriate adjustments will be actioned at the relevant stage.
- 5.2.18 Table 5.2 shows the target low frequency MNL limit that if required, based on our expert experience of similar events, will be applied at noise sensitive premises where the low frequency component of the music noise is dominant, likely to be at a distance greater than 1 – 2 km from the event.



**Table 5.2: Target Low Frequency Music Noise Level Criteria**

Location	Time Period	63 Hz and 125 Hz Octave Band Music Noise Level, $L_{Zeq,T}$ , dB
Noise monitoring location representative of a noise sensitive premises where the low frequency component of the music noise is dominant (measured in free-field).	12:00 to 23:00	75 (T = 15 min)

### **Community Hotline and Response to Complaints**

5.2.19 A dedicated community hotline, which will be published as aforementioned in Paragraph 5.2.1, will be available for the local community throughout the duration of the event. All complaints will be logged and those relating to noise will immediately be relayed to the Sound Control Consultant with details, where provided, of the complainant’s name, address and postcode, telephone number and a description of the disturbance.

5.2.20 Should any complaints of noise be received, at any time during the event, sound checks or sound propagation tests, the Sound Control Consultant will visit the complainants address and take a measurement. If MNL are measured to be above the limit immediate action will be taken on-site to reduce the level from the event. This will be achieved by two-way radio or mobile phone communication with all persons involved with the sound control procedures, thus a quick response to the problem can be actioned. However, from experience, it has been found that this pro-active sound control procedure will prevent the limits from being exceeded in the first place. Results of complaint investigation monitoring and any related actions will be collated and kept available by F1AC for inspection by the Local Authority at any time during the event.

### **Third Party Sound Systems**

5.2.21 LRASL will ensure that no unauthorised sound systems or amplification equipment are allowed on to the event site. Sound systems will only be authorised for use as part of the licensed entertainment or for use by authorised traders for the sole purpose of providing background music to their own concession.

5.2.22 LRASL will implement full control over the organisations and traders on site where there is amplified music being played.

## Post-event Report

- 5.2.23 A post-event noise compliance report will be available within an agreed timeframe after the event including a summary of the off-site noise levels measured throughout the event; actions taken as a result of the measurements; complaints received; complaint investigation measurements; and any actions taken as a result of complaint investigation.

## Figures

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### Music Noise Monitoring Positions

- MP1 – Rear of properties on Fulbrooke Road
- MP2 – Rear of properties on Selwyn Road
- MP3 – Millington Road / Kings Road
- MP4 – South Green Road
- MP5 – Broadway, Grantchester

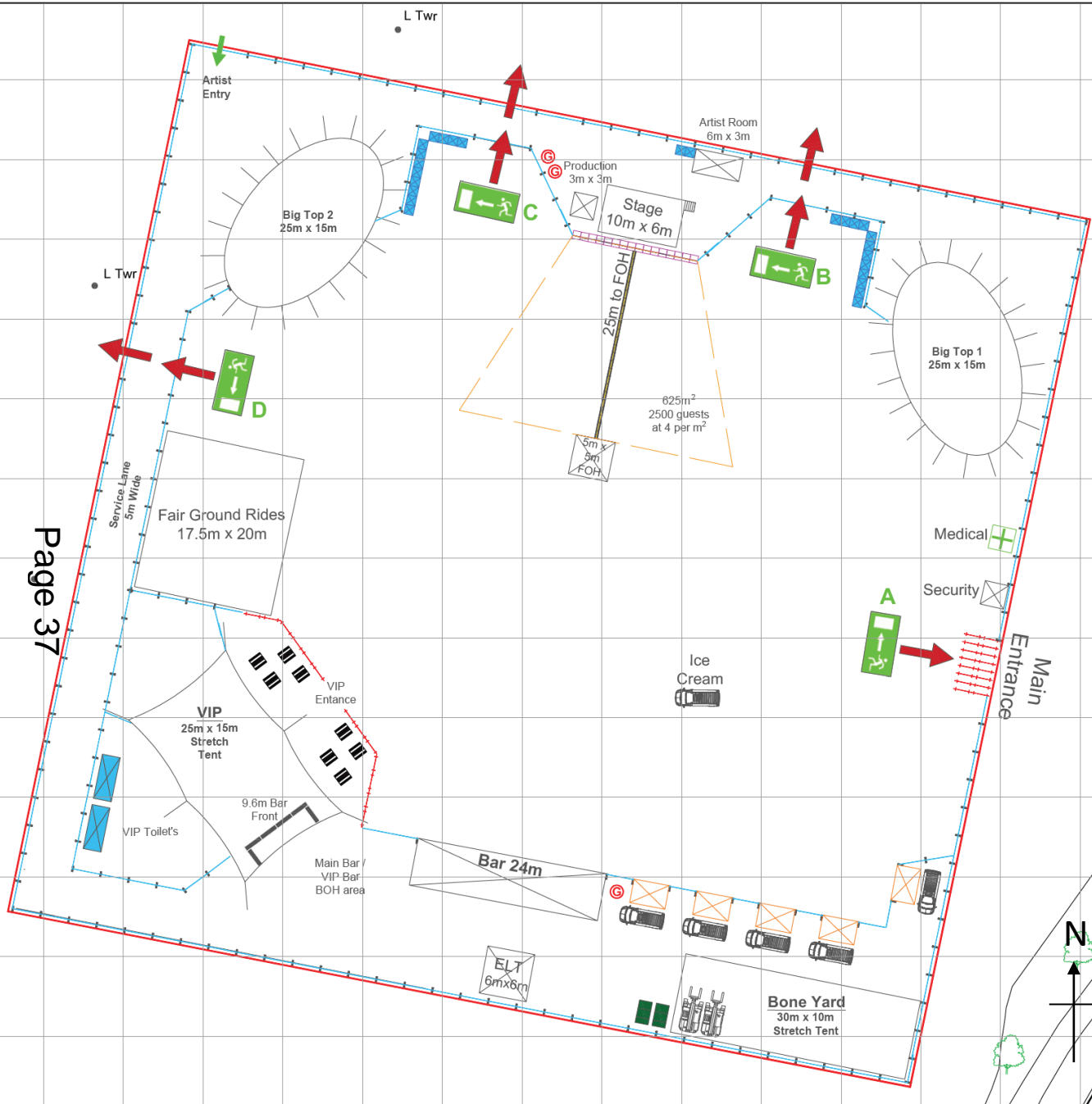
REV	DATE	D	R	DESCRIPTION
0	21/01/2025	RB	RM	Issue

## F1:Acoustics

38 Briton Hill Road, South Croydon, Surrey, CR2 0JL  
 info@f1acoustics.com +44 1273 526569 f1acoustics.com

PROJECT:	Cambridge Day Festival 2025 – NMP
CLIENT:	London Road Audio Services Ltd
TITLE:	Site Location and Nearest Noise Sensitive Receptors
DATE:	21/01/2025
REVISION:	0
SCALE:	Scale as shown.
DRAWING NO:	2040/CambridgeDayFestival2025-NMP/1/0
FIGURE NO:	1
DRAWN BY:	Rupert Burton
REVIEWED BY:	Robert Miller





Page 37

REV	DATE	D	R	DESCRIPTION
0	21/01/2025	RB	RM	Issue

# F1:Acoustics

38 Briton Hill Road, South Croydon, Surrey, CR2 0JL  
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PROJECT:	Cambridge Day Festival 2025 – NMP
CLIENT:	London Road Audio Services Ltd
TITLE:	Site Plan
DATE:	21/01/2025
REVISION:	0
SCALE:	Not to scale.
DRAWING NO:	2040/CambridgeDayFestival2025-NMP/2/0
FIGURE NO:	2
DRAWN BY:	Rupert Burton
REVIEWED BY:	Robert Miller

**Appendices**

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### Glossary of Acoustic Terms

Noise is defined as unwanted sound. The range of audible sound is from 0 dB to 140 dB. The frequency response of the ear is usually taken to be about 18 Hz (number of oscillations per second) to 18,000 Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than at the lower and higher frequencies, and because of this, the low and high frequency component of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most used and which correlates best with the human subjective response to noise is the A-weighting. This is an internationally accepted standard for noise measurements.

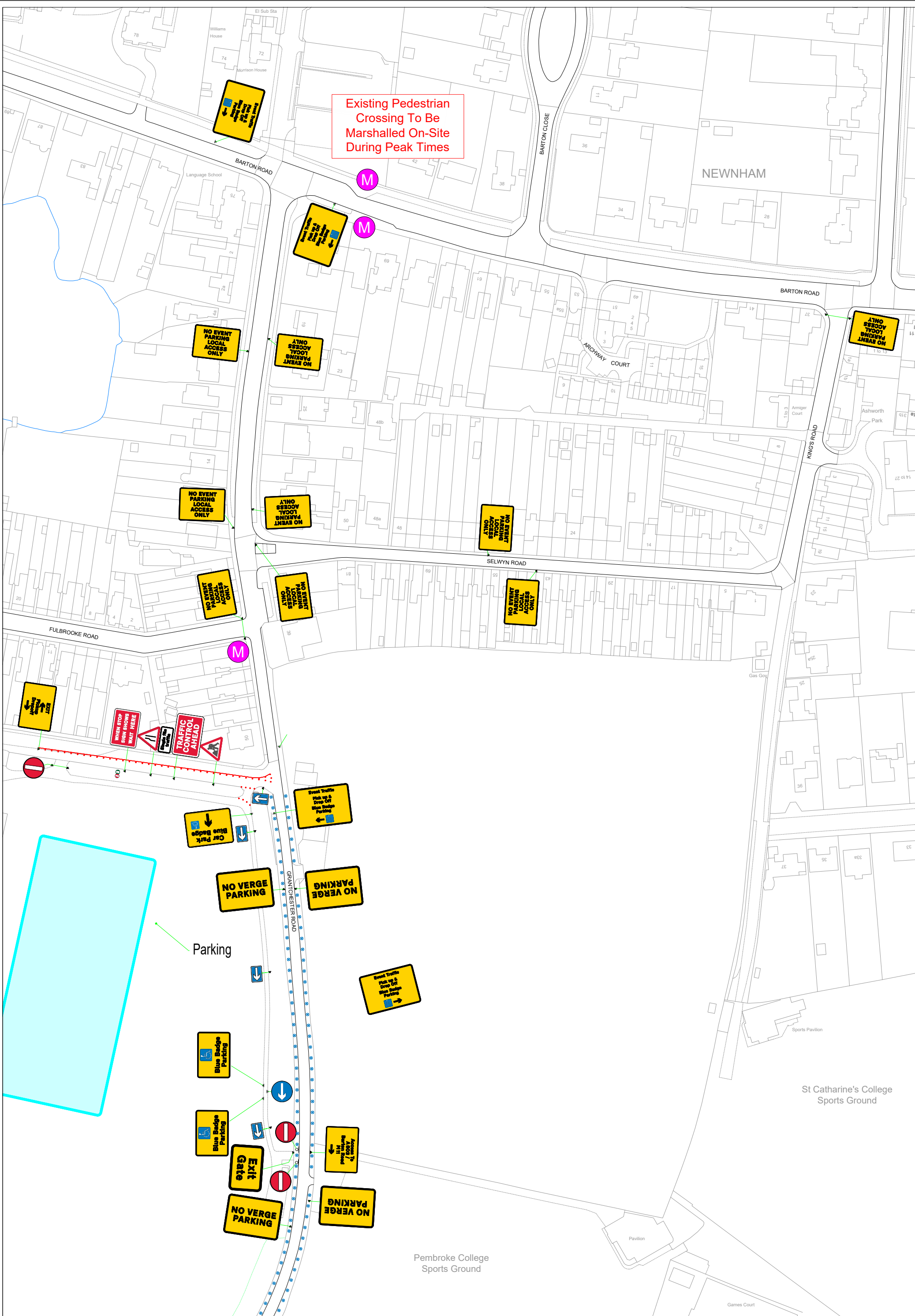
The ear can just distinguish a difference in loudness between two noise sources when there is a 3 dB difference between them. Also when two sound sources of the same noise level are combined the resultant level is 3 dB higher than the single source. When two sounds differ by 10 dB one is said to be twice as loud as the other.

The subjective response to a noise is dependent not only upon the sound pressure level and its frequency, but also its intermittency. Various indices have been developed to try and correlate annoyances with the noise level and its fluctuations. The indices and parameters used in this report are defined below:

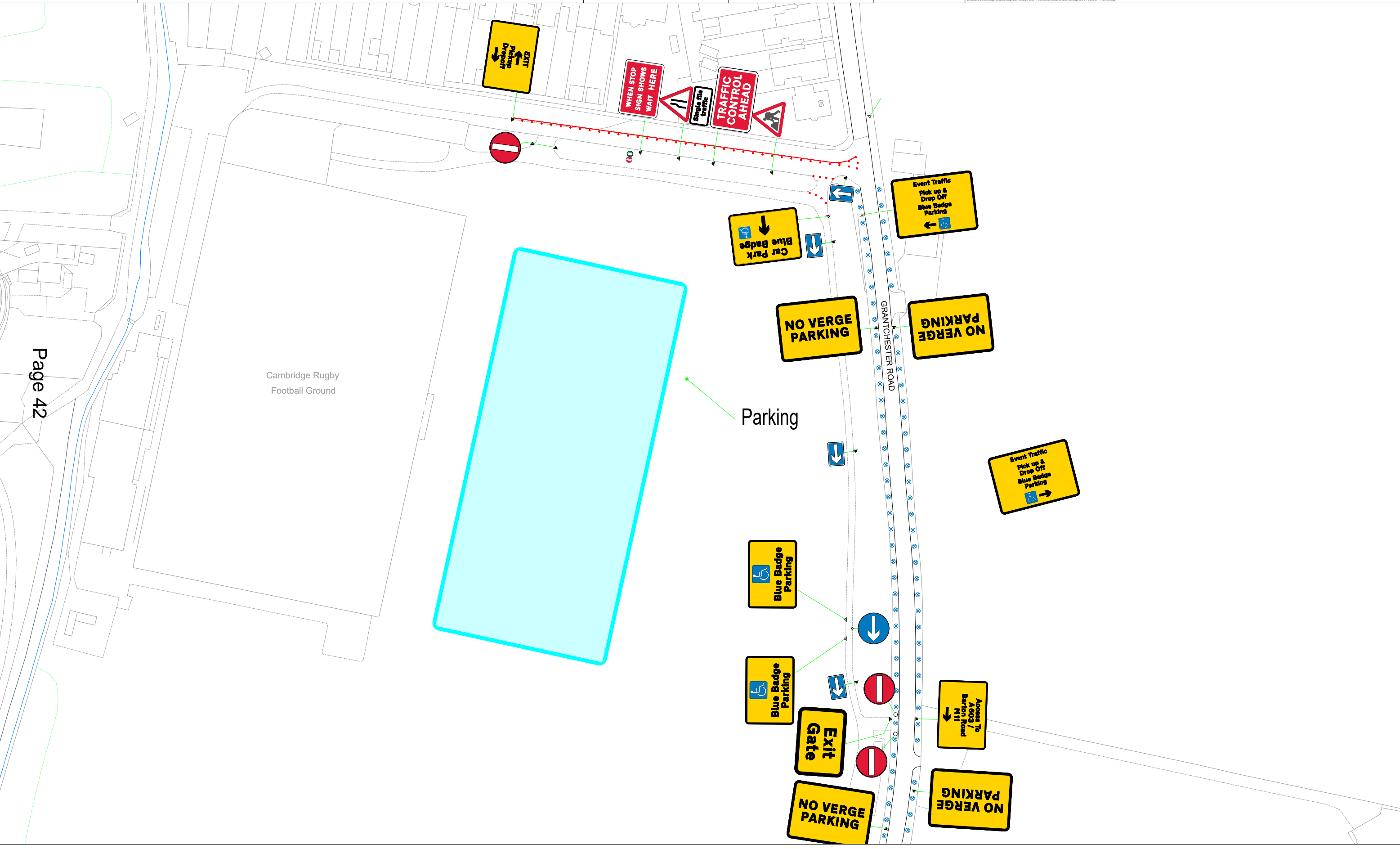
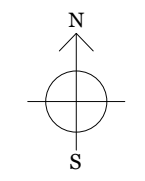
- **Background Noise Level** – The prevailing sound level at a location, measured in terms of the  $L_{A90,T}$ , on an equivalent day and at an equivalent time when no concert or sound checks are taking place.
- **dB(A)** – The A-weighted sound pressure level whereby various frequency components of sound are weighted (equalized) to reflect the way the human ear responds to different frequencies.
- **$L_{Aeq}$**  – The equivalent continuous sound pressure level which at a given location over a given period of time contains the same A-weighted sound pressure level of a steady sound that has the same energy as the fluctuating sound under investigation.
- **$L_{AN,T}$**  – The A-weighted sound level exceeded for N% of the measurement period (T).
- **Music Noise Level (MNL)** – The  $L_{Aeq}$  of the music noise measured at a particular location.
- **Noise Consultant** – A person given responsibility by the organiser of the event for monitoring noise levels in accordance with the prevailing conditions, and who has the ability and authority to make decisions and implement changes in noise level during the event.

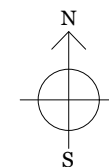
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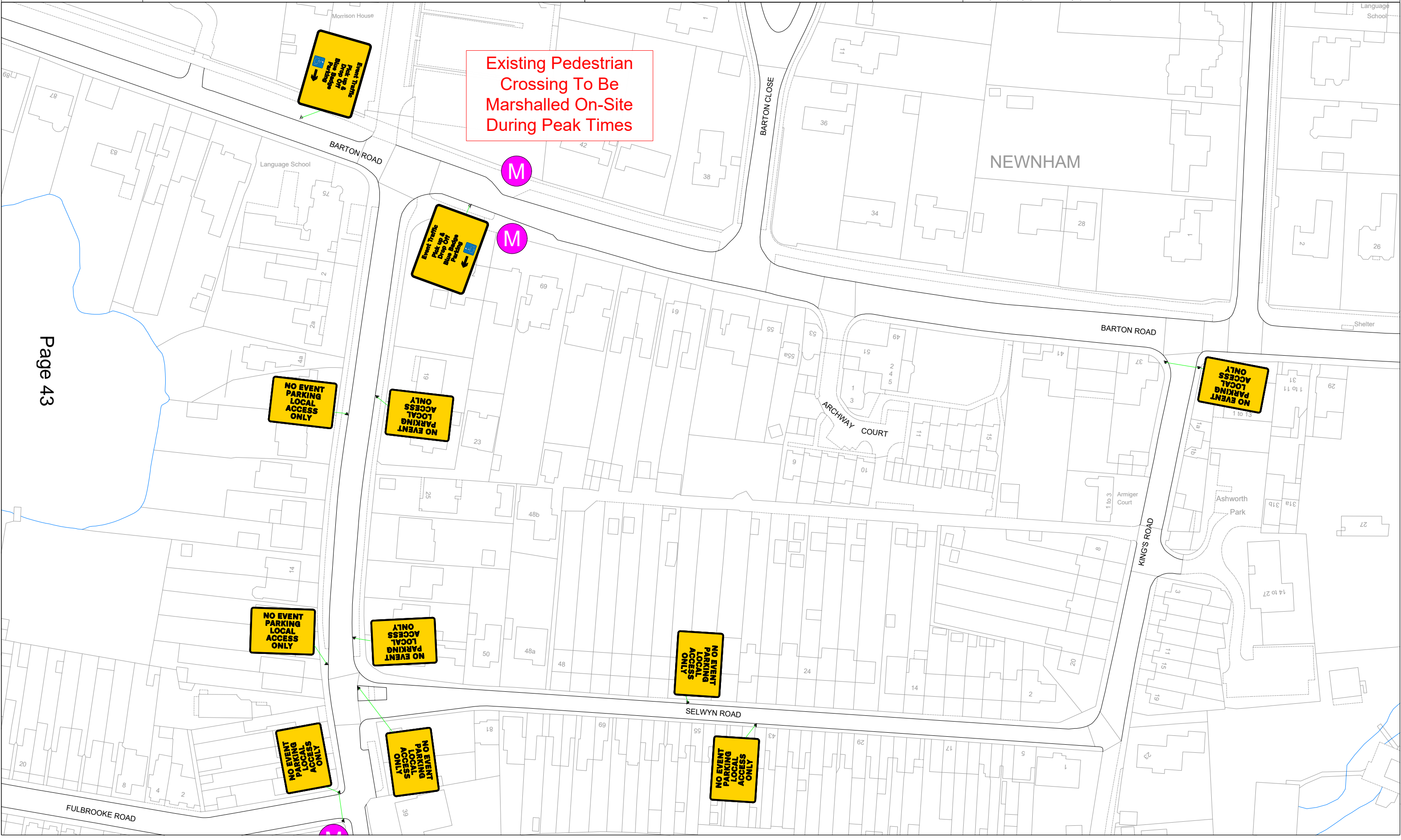
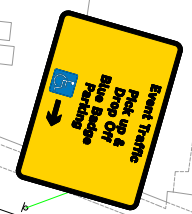


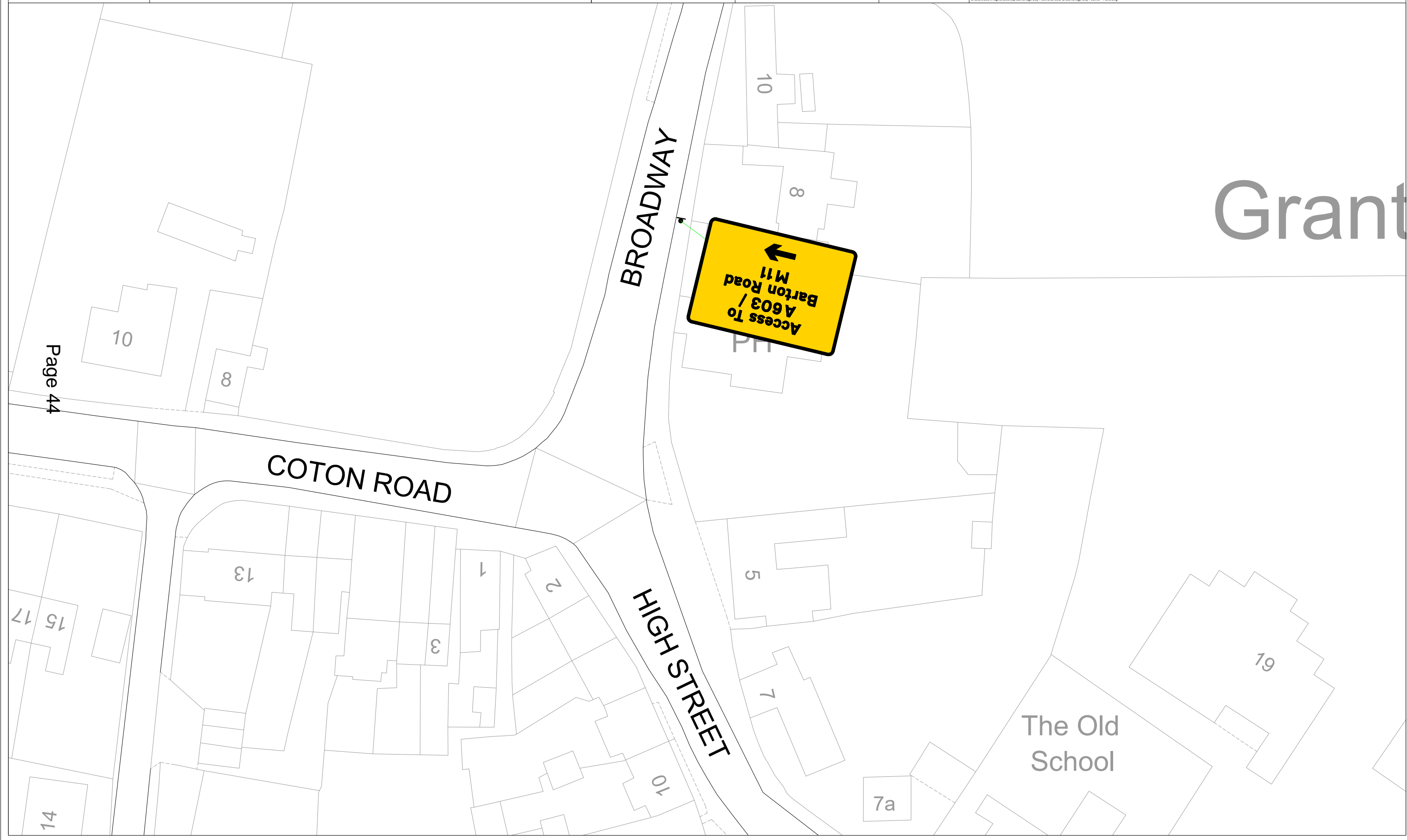
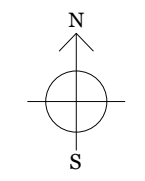
Existing Pedestrian Crossing To Be Marshalled On-Site During Peak Times



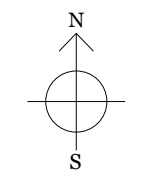


Existing Pedestrian Crossing To Be Marshalled On-Site During Peak Times









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