

Background Sound Level Survey

2 Spinningfields Square, Manchester



Client: Caprice Restaurants

Report Reference: 211004-R002

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Rev:	Date:	Author:	Checked:
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1. INTRODUCTION

ACA Acoustics have been commissioned by Caprice Restaurants to undertake a background sound level survey at roof level of 2 Spinningfields Square, in order to provide data for future mechanical plant installations and alterations.

Results of the sound level survey are presented in this report.

2. SOUND LEVEL SURVEY

ACA Acoustics have attended site, and undertaken a sound level survey at flat roof level over a 24-hour period. Details of the sound level survey carried out by ACA Acoustics are provided below.

An unattended survey was carried out by Tommy Burn of ACA Acoustics Limited over a 24-hour period between the 19th – 20th January 2022. The survey was conducted generally following procedures set out in BS 4142:2014+A1:2019.

The survey was conducted at flat roof level, with the microphone extended over the parapet wall on an extendable pole. Photograph of the sound level survey location is included in Figure 1.

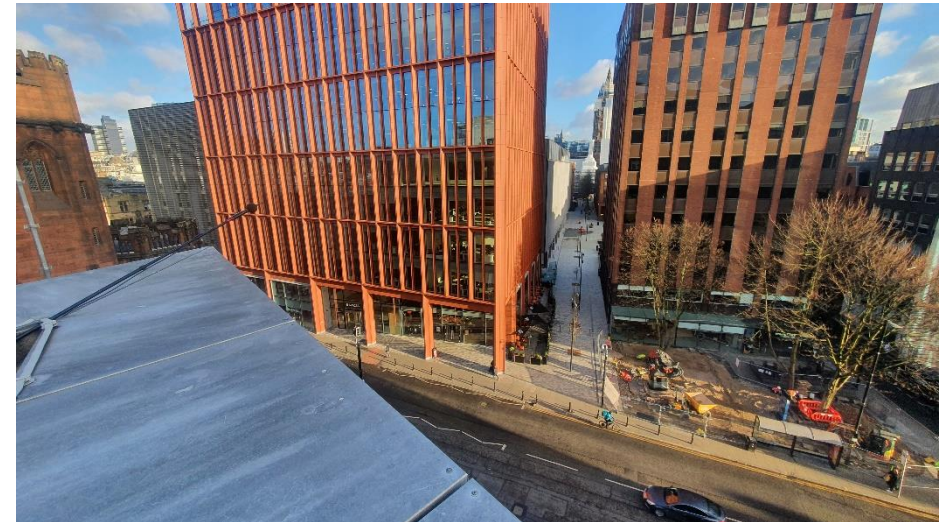


Figure 1: Sound level survey location

During the survey, ambient sound levels in the vicinity consisted of road traffic on nearby routes, along with mechanical services equipment also situated on the flat roof. The equipment was subjectively audible at a low level, although being partially screened to the measurement location.

Construction activity on Spinningfields Square was also subjectively clearly audible during daytime periods.

The following equipment was used during the survey; the sound level meter was calibrated before the survey and checked after with no deviation noted.

Equipment	Serial Number
NTi Audio Class 1 sound level meter type XL2 complete with weatherproof and lockable outdoor environmental kit	A2A-06294-E0
Svantek calibrator type SV33B. Compliant to IEC 60942-1:2003 (Calibrated to a reference traceable to NIST)	83826

Table 1: Equipment used for the sound level survey

Weather conditions at the time of setting up the survey were cool, dry, and calm, and are not considered to have adversely impacted the outcome of the assessment.

Results of the survey are shown in Figure 2 below.

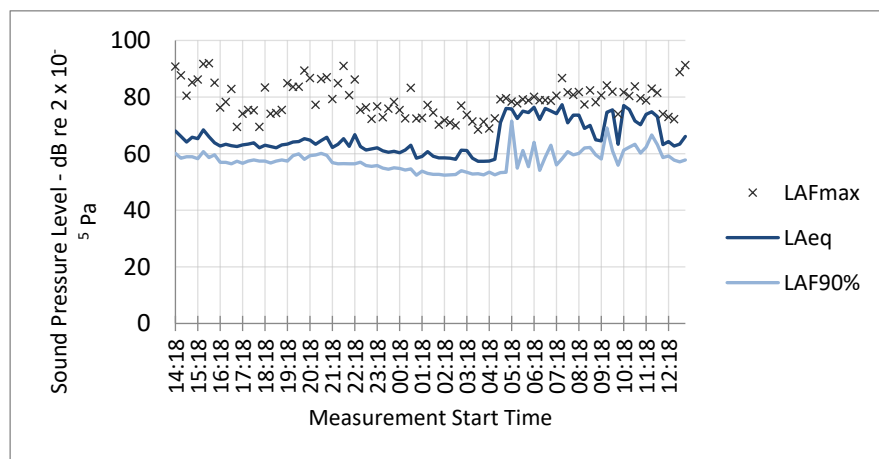


Figure 2: Sound level survey results

As can be seen in Figure 2, a high level was measured starting at around 04:00 hours. This source was not clearly identifiable while on site, however it is likely it was caused by equipment operating on the roof. As a result it is unlikely that measured results are representative of levels in the wider acoustic climate.

It is considered that levels measured during ACA Acoustics' manned survey for previous report reference 211004-R001B will be more representative of the acoustic climate in the area.

Measurement results from ACA Acoustics' previous visit to site, and measured at ground floor level during the evening and night time period are shown in Figure 3 below.

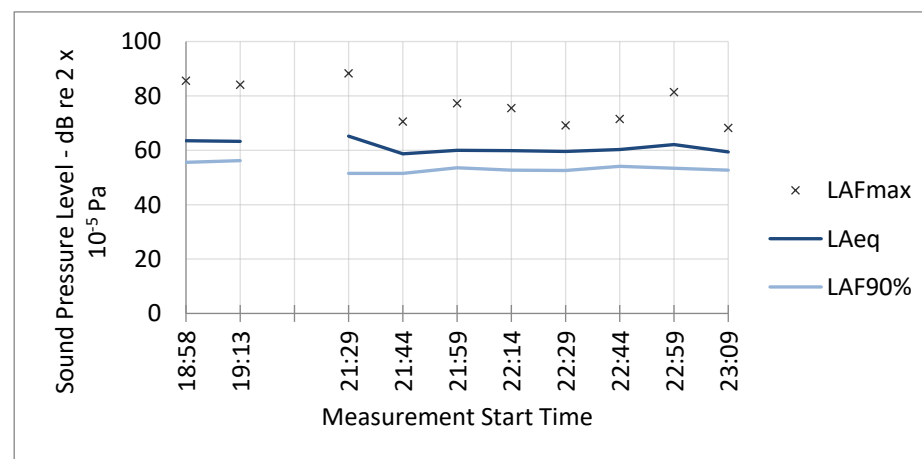


Figure 3: Sound level survey from ACA Acoustics' previous report reference 211004-R001B

Measurement indices	Level
Ambient sound level LAeq, dB 19:00 - 23:00 hours	61dBA
Typical background sound level LA90, dB 19:00 – 23:00 hours	53dBA

Table 2: Summary manned sound level survey results

It is understood that Manchester City Council require assessment of new mechanical services equipment to be undertaken in accordance with BS 4142:2014+A1:2019. In accordance with this, it is recommended that future plant should be designed to not exceed a rating level of LA90 53dB, the typical measured background sound level at nearby noise sensitive windows.

