

## **PE1831/B**

Petitioner submission of 23 November 2020

Background amplified audio levels and verbal communication in hospitality settings in the context of Scottish Government Covid-19 restrictions

### Executive summary

In partnership with the UK Acoustics Network (UKAN), KSG Acoustics has undertaken a series of field studies to investigate the effects of varying background audio levels on verbal communication in the context of Scottish Government Covid-19 restrictions applicable to hospitality settings.

This report has been prepared in response to statutory guidance published by the Scottish Government on 14 August 2020, which introduced measures to eliminate background music and audio in hospitality settings. In the context of other published studies, it aims to examine the effects of controlled low levels of background audio on the ability of groups of test subjects to verbally communicate without significantly raised vocal effort and within the constraints of current physical distancing requirements.

Amplified audio signals comprising open source 'speech babble' and pre-recorded music content were generated through in-house PA systems, and typical levels measured adjacent to a group of test subjects positioned 1m from each other at a table located closest to the PA loudspeakers. Each test comprised a timed two-minute period, during which test subjects were required to participate in a discussion around a range of pre-agreed subjects. After each test, subjects were asked to complete a set of subjective response questions before repeating the test at an increased audio signal volume.

The absolute and accurate measurement of speech intelligibility is complex, and this study does not pertain to reproduce it. The tests are, however, based on controlled listening conditions using in-house PA loudspeakers in real hospitality settings affected by the current restrictions.

The results of the field tests reflect the results of other relevant published studies and provide a clear indication that well-managed background amplified audio can be safely reintroduced to hospitality settings without increasing the risk of significantly increased vocal effort, or breaching physical distancing requirements.