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COMMENT ON RSK RESPONSE TO CASS ALLEN REVIEW OF COLE JARMAN NOISE ASSESSMENT

This report provides commentary on the response prepared by RSK Acoustics (formerly Cole Jarman) (reference *Response to Cass Allen Report* Ref. 19/0333/M02) following the Cass Allen review of their initial noise assessment entitled *Land at Maple Lodge Close, Maple Cross – Planning Noise Assessment* (Ref. 19/0333/R2). For consistency RSK Acoustics/ Cole Jarman will be named throughout this report as appropriate to represent the company understood to have produced the relevant item of work.

Cass Allen raised 4 main concerns regarding the initial noise assessment, each of which have been responded to and are addressed in turn below:

1) Cole Jarman Noise Limits do not Account for Existing Noise Environment

RSK Acoustics maintain that the noise limits set in the Cole Jarman noise assessment are adequately robust such that the impact of commercial noise at the level would be acceptable and residents would be suitably protected.

RSK Acoustics assert that an appropriate design target should be based on the assumption that background noise levels are low and therefore absolute noise levels might better represent the possible impact than a comparison of commercial noise against background levels. BS4142:2014 does state that use of absolute noise levels might be more appropriate in cases where background noise levels are low, however no noise survey was carried out by Cole Jarman demonstrating that background noise levels are sufficiently low so as to warrant this methodology. Instead Cole Jarman state that, no matter what the results of a comparative assessment would indicate, the proposed noise limits would represent the lowest noise levels necessary to fully protect the residents' amenity.

Cass Allen did carry out such a survey and the results of that survey indicate background noise levels would not be classified as low by the definition presented in the previous version of the same British Standard (which is commonly used in similar circumstances as the current version does not contain any quantitative guidance as to what would constitute "low"). It should also be noted that the rated noise levels predicted by Cole Jarman are also above the level considered by BS4142:1997 to be low, below which absolute noise levels would be considered. Therefore the most appropriate assessment methodology would be a comparison of rated commercial levels to the existing background noise levels.

With this appropriate methodology the commercial activities would significantly exceed the "low impact" threshold would be only 1dB below the "adverse impact" level presented in BS4142. It is our experience (and is reflected in the requirements of the vast majority of Local Authorities to which we have submitted similar assessments) that a design target of "low impact" is generally appropriate when aiming to protect surrounding residents from new commercial noise.

RSK Acoustics raise the consideration of “context” as justification for relying solely on assessment absolute noise levels and quote Section 11 of BS4142:2014:

The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.

Regarding context considerations BS4142:2014 goes on to state:

1) The absolute level of sound. For a given difference between the rating level and the background sound level, the magnitude of the overall impact might be greater for an acoustic environment where the residual sound level is high than for an acoustic environment where the residual sound level is low.

Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.

Where residual sound levels are very high, the residual sound might itself result in adverse impacts or significant adverse impacts, and the margin by which the rating level exceeds the background might simply be an indication of the extent to which the specific sound source is likely to make those impacts worse.

2) The character and level of the residual sound compared to the character and level of the specific sound. Consider whether it would be beneficial to compare the frequency spectrum and temporal variation of the specific sound with that of the ambient or residual sound to assess the degree to which the specific sound source is likely to be distinguishable and will represent an incongruous sound by comparison to the acoustic environment that would occur in the absence of the specific sound. Any sound parameters, sampling periods and averaging time periods used to undertake character comparisons should reflect the way in which sound of an industrial and/ or commercial nature is likely to be perceived and how people react to it.

NOTE 3 Consideration should be given to evidence on human response to sound and, in particular, industrial and/or commercial sound where it is available. A number of studies are listed in the “Effects on humans of industrial and commercial sound” portion of the “Further reading” list in the Bibliography.

3) The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions, such as:

i) facade insulation treatment;