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PEER REVIEW AND DISCUSSION OF LAND AT MAPLE LODGE CLOSE NOISE ASSESSMENT

This report summarises the Cass Allen peer review of the Cole Jarman report entitled *Land at Maple Lodge Close, Maple Cross – Planning Noise Assessment* (Ref. 19/0333/R2) and discusses the results and implications of a site noise survey carried out by Cass Allen as instructed by The Maple Cross and West Hyde Residents Association.

There are a number of key areas in which it is considered that the Cole Jarman report either does not fully consider or underestimates the potential noise impact of the proposed commercial use of the Maple Lodge Close site on the amenities of nearby residents. These are discussed below.

Incorrect Commercial Noise Limits

The Cole Jarman assessment proposes commercial noise limits at the positions of the nearest noise sensitive receptors based on an amalgamation of guidance contained within World Health Organisation *Night Noise Guidelines for Europe* and BS4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*. Based on this methodology the following noise limits are proposed at the positions of nearby noise sensitive receptors:

- Day-time rating noise limit: 45 dB L_{Ar,Tr}
- Night-time rating noise limit: 40 dB L_{Ar,Tr}

Cole Jarman consider the above noise limits applicable irrespective of the existing noise environment (apart from in the case when background noise levels significantly exceed the above values) however this is not in line with the guidance and assessment methodology presented in BS4142 itself. Use of BS4142 (without combination with other standards and guidance) is commonly used to establish the likely noise impact of any commercial operations on existing sensitive receptors. The Inspector's findings in a recent planning appeal regarding an application to extend operation hours of a distribution depot found that BS4142 was the relevant document and should be followed precisely without any additions (Appeal Ref: APP/Y0435/W/20/3252373 – Blakelands, Milton Keynes Council). It is important to note that the proposed operations at the Blakelands site were very similar to those proposed at this site. The Inspector found that 24 hour delivery/ distribution operations in close proximity to noise sensitive receptors were likely to be detrimental to the amenities of local residents and could cause sleep disturbance and lead to adverse health impacts. The Inspector therefore rejected the appeal.

For information, the assessment methodology presented in BS4142 can be summarised as follows:

1. Measure the existing background noise levels (LA_{90,T} dB) at the locations of nearby noise sensitive receptors during the quietest periods when the noise source(s) under investigation will operate;

2. Predict or measure the noise emissions (LAeq,T dB) from the noise source(s) under investigation at the location(s) of the nearby sensitive receptors, and add corrections for any distinguishable acoustic features (e.g. tones, whines, screeches, hisses etc);
3. Subtract the measured background noise levels (Item 1 above) with the measured or predicted rating noise levels (Item 2 above) at each sensitive receptor. BS4142 states that:

a) Typically, the greater this difference, the greater the magnitude of the impact.

b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.

c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.

d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

NOTE Adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.

The above clearly indicates that a noise survey of the site should be carried out in order to establish the existing background noise levels in the absence of the commercial noise. This was not done by Cole Jarman.

Cass Allen carried out a noise survey at the site from Thursday 22nd to Monday 26th April 2021. The survey took into account two key locations representative of the existing residences to the west and east of the site.

Figure 1 Cass Allen Measurement Locations



The background noise levels were found to be dictated by road traffic on the M25, the local road network and general environmental noise (i.e. tree rustle etc.). The results of the survey were as follows:

Table 1 Cass Allen Survey Results

Location	Time Period	Lowest Typical Background Noise Level (15mins)
L1	Day (0700-2300hrs)	43 dB LA90
	Night (2300-0700hrs)	35 dB LA90
L2	Day (0700-2300hrs)	37 dB LA90
	Night (2300-0700hrs)	32 dB LA90

It is noted that background noise levels are significantly lower at position L2 than at L1, this is discussed further below.

BS4142:2014 states:

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.

However this document does not quantify what constitutes "low" noise levels. It is therefore common practice to refer to the previous issue of BS4142 (released 1997) which states:

NOTE. For the purposes of this standard, background noise levels below about 30 dB and rating levels below about 35 dB are considered to be very low.