John David

From:
Sent: 22 July 2020 11:56
To: John David
Subject: Fwd: Noise assessment report

Hi John,

Pls see reply below regarding the sound test.

Regards
Harry Pelentrides
Director

The Noble Gentleman
56 Theobalds Road
London
WC1X 8SF

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Begin forwarded message:

> **From:**
> **Date:** 22 July 2020 at 11:47:53 BST
> **To:** Harry Pelentrides
>
> **Subject: RE: Noise assessment report**
>
> Good Afternoon Harry,
>
> Thank you for sending the Planning Officers comments. We have read through the Environmental Health Observations currently on the planning portal.
>
> Please see our comments below.
>
> *The make and model of the equipment has not been stated within the report but a sound power level of 52.5dB has been used for assessment purposes.*
>
> The sound power level of 52.5 in Table 5 is a slight typo. The 52.5dB is a sound pressure level that was measured at 1.5m. This has then been distance attenuated to 3m at the nearest receptor.
>
> The condenser you installed is a Carrier 38QUS048DS-1. We have checked the sound data on the Carrier data sheet and the Sound Power Data is 75dB and Sound Pressure Data of 64dB; although, the data sheet does not discuss how the measurements were undertaken.
>
> We often find that an actual site measurement should be carried out where plant is present and installed. The differences in the results measured with the Carrier data sheet suggest that the unit

may not have been running at full capacity. We are happy to work with the data sheet on this basis, or the condenser can be measured again making sure that it is running at full capacity.

The acoustic assessment has not taken into account current Camden criteria but has taken into account national planning policy in which our criteria is based.

At the time of writing the report, the Local Authority condition pointed to www.camden.gov.uk/noise-vibration-ventilation-assessments this is a page on the Camden website, which goes on to provide links to The Institute of Acoustics and The Association of Noise Consultants etc, but not specific criteria. We have found; however, the Camden UDP 2004, which discusses criteria not dissimilar to BS4142:2014. We are happy to work to these criteria; however, I would like to be provided a copy from Camden in order to know that we are working to the most recent version.

An environmental noise assessment has been carried out at the above site with background and residual noise levels measured externally over for 30 minutes and a 10-minute measurement of the operational noise of the unit. The measurements were carried out during a typical weekday.

The following statement is in section 8.1.3 of BS4142:

8.1.3 Ensure that the measurement time interval is sufficient to obtain a representative value of the background sound level for the period of interest.

Given that the location is by a main A road, we found that the residual levels were consistent; and therefore, were unlikely to change during the course of the working day. In our opinion the background measurement was a representative value of the background sound level. Our background result was undertaken in $L_{A90,\ 5minutes}$. The results showed that the values ranged between 59 - 63dB, where 4 of those values were at 60dB as used in the report.

Unfortunately, the minimum assessment period for plant to obtain a representative L90 should be 24hrs. If the unit is to operate during daytime hours these times are considered between 07:00 to 23:00. The assessment period of 30 minutes and 10 minutes are not sufficient to give a suitable reflection of the current noise environment.

I understand that the operating hours are between 09:00 – 20:00 hours. I'm not sure why we would need to measure for 24 hours, as the data outside of these hours would be useless as the plant is not being used outside of these hours. Normally the assessment would be made during operating hours.

At the time of scoping out the best methodology for this assessment, it was not possible to set up a long term unmanned measurement securely and we assume that is still the case currently. Due to this, we turned to the guidance in BS4142:2014, the British Standard which sets the methodology for undertaking noise impact assessments of this nature.

This is further backed up as an acceptable approach by BS4142:2014 'A.1 Example 1', an LA90 background was measured over 40 minutes and is sufficient to assess the noise impact. Shorter samples of background noise are commonly accepted in situations where it is not feasible to obtain longer measurement periods. In this case a shorter measurement period was chosen due to the limitations present and it is our view that the measured background levels are representative of the levels present throughout the operational hours of the condenser unit.

In terms of the 10 minute measurement of the operational plant, again we look to BS4142:2014.

'7.3.9 Determine the specific sound level over a time interval which reflects all significant temporal and level variations of the specific sound.

NOTE If the sound is steady, a short sample measurement is sufficient. If it is cyclic or intermittent or varies randomly, a longer sample is required to characterize it. It might be necessary to investigate the sound over relatively long periods to select an appropriate, representative measurement time interval.'

With the condenser unit displaying a steady sound level, it was determined in accordance with BS4142:2014 measurement methodology that a 10 minute measurement of plant noise would be more than sufficient.

The calculated noise level of -13dB below background would be sufficient to meet current noise criteria but the background level being used cannot be relied upon as being correct due to the assessment procedure that was carried out and therefore the submitted assessment and proposal in unacceptable in environmental health terms.

It is our view therefore that we have carried out valid measurements with which to undertake the noise impact assessment of the external mechanical fixed plant at 56 Theobalds Road.

We are happy for you to forward this on to the Planning Officer or if you supply us with their contact details we can discuss it with them directly.

Kind Regards
William Wright
Acoustic Consultant

<image002.png>

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