T E C H N I C A L M E M O

Our Ref: 8843LZ – V2

To: Saint Espresso, 20 Camden High Street, London, NW1 0JH

From: P Soler, BEng, MIOA, MIET

Date: 22/12/2022

Subject: Validation Testing of Noise Emissions from 1 No. Condensers

Site Address: 20 Camden High Street, London, NW1 0JH

Brief: NOVA Acoustics Ltd has been commissioned to undertake validation testing, in accordance with BS4142:2014+A1:2019, of the 1 No. condensers associated with the coffee shop located at the above address.

The applicant has received conditional planning approval, 2022/0931/P - Installation of air conditioning unit and acoustic enclosure to front flat roof at 1st floor level in connection with existing cafe use (part retrospective). from London Borough of Camden. The following planning condition requires discharging;

"Condition4

Within 1 month of the date of this decision notice, a post-installation noise assessment shall be carried out and be submitted to the Council for approval in writing, to confirm compliance with the noise criteria and with details of any additional steps taken to mitigate noise as identified in the supporting Noise Impact Assessment from Nova Acoustics (ref. 7107SC version 001) dated 02/03/2022. All approved details shall be implemented, and thereafter, be permanently retained and maintained in accordance with the manufacturers' recommendations. The external noise level emitted from plant, machinery or equipment at the development hereby approved, along with any specified approved noise mitigation, shall be lower than the typical existing background noise level by at least 10dBA, by 15dBA where the source is tonal, as assessed according to BS4142:2014 at the nearest and/or most affected noise sensitive premises, with all machinery operating together at maximum capacity.

Reason: To ensure that the amenity of occupiers of the development site and surrounding premises is not adversely affected by noise from all equipment in accordance with the requirements of policies A1 and A4 of the London Borough of Camden Local Plan 2017."

Review: NOVA Acoustics Ltd was commissioned by the client in March 2022 to undertake a Noise Impact Assessment, Ref: 7107SC, in accordance with BS4142:2014+A1:2019. To assess the noise emissions from the installed external plant and advise on any necessary mitigation measures to reduce the noise to a satisfactory at the closest NSR. It is noted that the closest NSR is a window approx 3m from the plant equipment on the flat roof where the plant has been installed.

The results of the initial assessment indicated that the noise levels from the plant unit fell 4 dB below the background sound level. However, the noise levels fell 6 dB above the Camden Local Plan Criteria. Therefore, the report outlined mitigation measures in order to reduce the noise from the extraction and satisfy the Local Council's requirements. The report can be found in Appendix B.

The client has advised that acoustic mitigation measures have been installed to ensure the 1 No. condenser does not cause impact at the closest noise sensitive receptor (NSR).

In order to validate the mitigation measures outlined in report ref. 7107SC, a second visit to the site was undertaken on the 15th and 21st of December 2022. During the site visits, it was found that the 1 No. condenser unit has been fully enclosed, as recommended in our initial report. Please, refer to the images below:

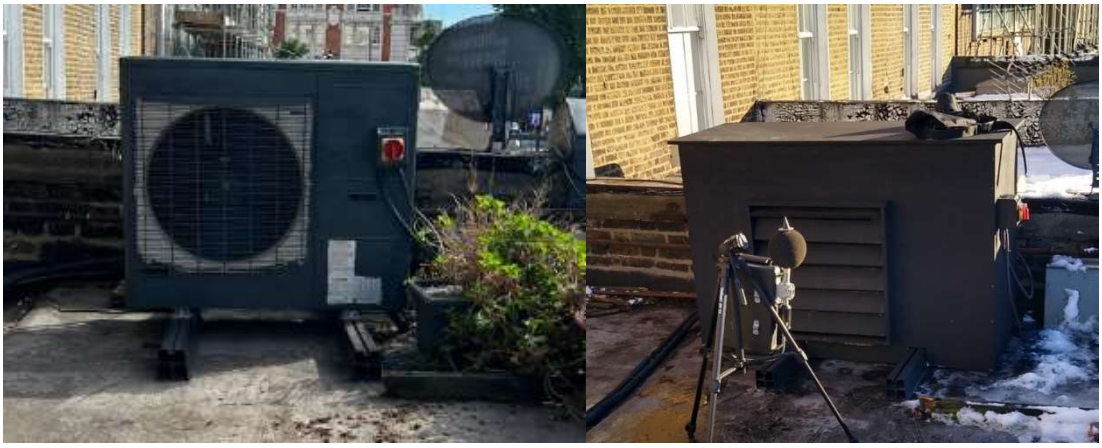


Figure 1.0 – AC Condenser without and with enclosure

As can be seen in the images below, the installed condenser has been enclosed in a box comprised of 18mm chipboard with a louvre. The initial report (ref. 7107SC) stated that a minimum sound reduction of 6 dB ware required. This should be easily provided by the chipboard, however, no technical data showing the acoustical properties of the louvre has been provided. Therefore, spot measurements were carried out at 1m of the louvre in order to ascertain the noise emissions of the condenser.

The measurements (MP1) were taken at 1m from the louvre of the condenser enclosure and it was used to undertake spot measurements of the noise levels with the unit ON and OFF. The measurement position can be found highlighted in Figure 1.0 and in Appendix A.

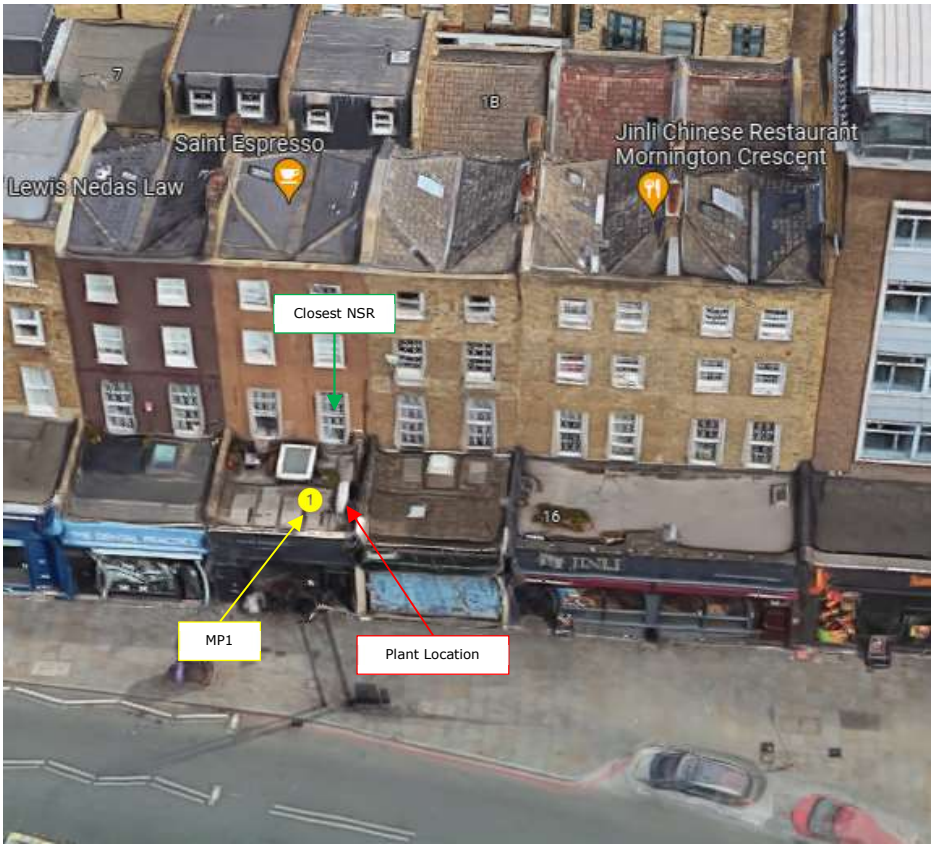


Figure 2.0 - Site and MP Location

The results of both measurements can be found in the table below.

MP1	
Measurement Time (t)	**$L_{Aeq,t}$ (dB)**
Plant ON – 15/12/2022 – 11:59 – 12:31	64.5
Plant OFF – 15/12/2022 – 12:31 – 13:01	63.7
Difference	**0.8**

Table 1.0 – Survey Summary Results – MP1

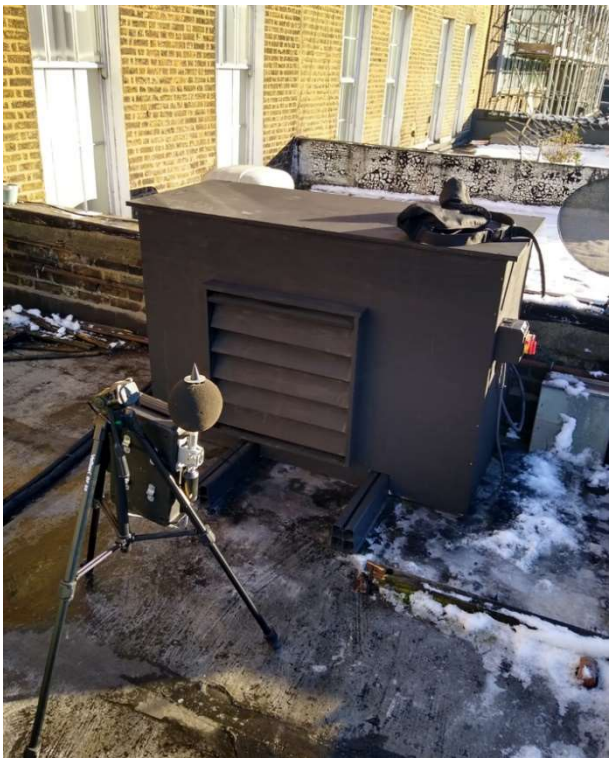
As can be seen in the table above, the noise levels from the period with the plant ON produced analogous noise levels to that of the plant OFF and as such no specific plant noise could be fully defined at the measurement position. BS4142:2014+A1:2019 stipulates that residual and ambient noise levels need to be a minimum of 3 dB difference in order to calculate specific noise levels.

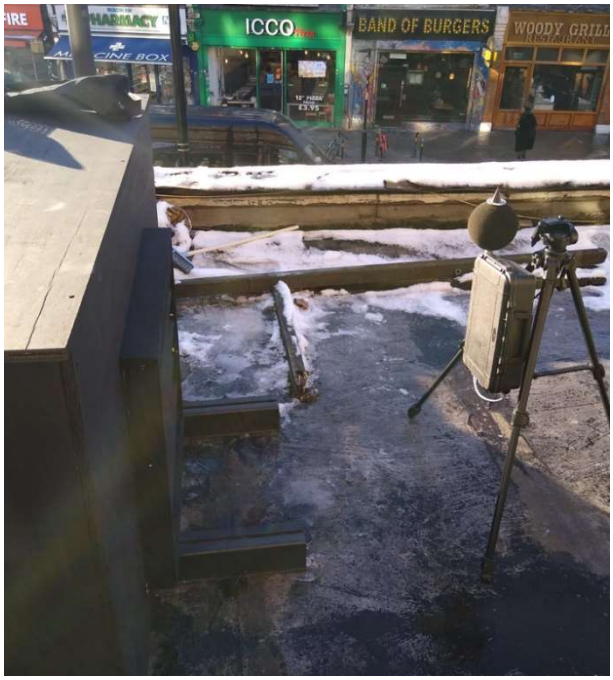
Conclusion: As shown in this report, the required mitigation measures have been implemented appropriately. In addition, it has also been demonstrated that the installed enclosure provides levels of sound reduction enough to ensure that the noise emissions of the unit are inaudible at the surrounding residential dwellings. This shows that there will no be impact in the surrounding NSRs and can be classed as 'No Observed Effect Level' (NOEL) when assessed in accordance with the NPSE and NPPF.

DOCUMENT END

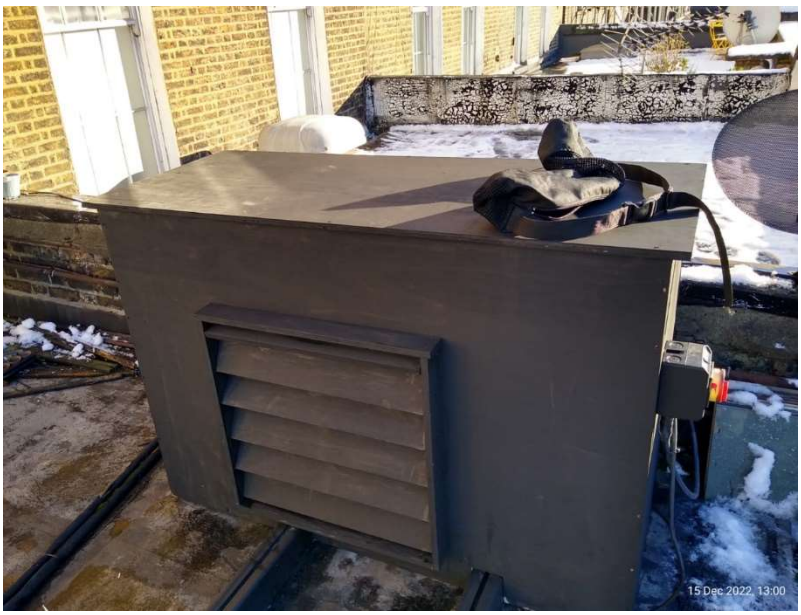
Appendix A – Site Pictures

MP1 Location





Mitigation – Enclosure



Appendix B