

Project

49 High Street, Bognor Regis

Prepared for

EU Supermarket Ltd

By

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Summary

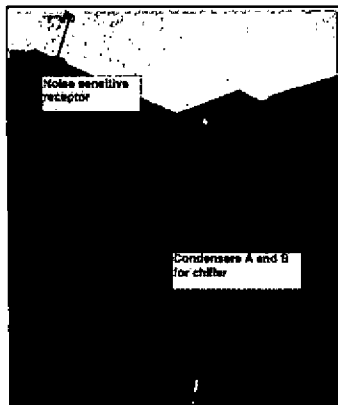
SRL Technical Services Limited has been commissioned by EU Supermarket Limited to assess the noise impact of plant as part of a retrospective planning application for two metal containers (to store food) and several condensing units at the rear of 49 High Street in Bognor Regis.

The local authority originally requested that the rating level from the condensers should be 10 dB below the existing background noise level at the nearest noise sensitive receptor. Further conversation with the Environmental Health Officer confirmed that the assessment should be done to the guidelines stated in BS4142:2014 instead.

The nearest noise sensitive receptor is the first-floor accommodation next door (at 51 High Street). I understand that the dwelling is occupied by the operators of Pick A Wish, an off licence and mini market located on the ground floor of 51 High Street. The current noise environment at their window is from four condenser units which are attached to the southern façade of their property.

Noise measurements and assessment of the condensers at 49 High Street indicate that plant noise is unlikely to cause adverse impact.

As condensers A and B (in diagram below) are the most prominent noise sources from no 49, we believe it would be prudent to relocate them, for example to the south-east corner (opposite end of the building) of the building, away from the NSR.



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For and on behalf of

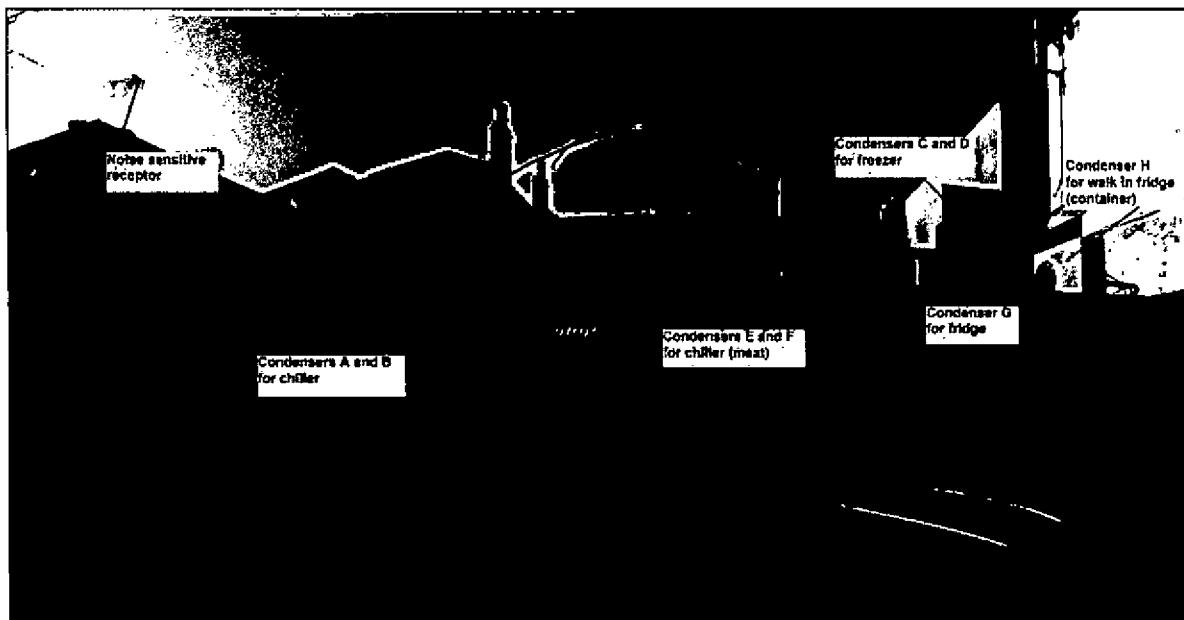
SRL Technical Services Limited



1.0 Introduction

EU Supermarket Limited have submitted a retrospective planning application for the installation of two metal containers for food storage and several condensing units at the back of their supermarket, located at 49 High Street in Bognor Regis. The application has been refused on the basis that insufficient detail has been provided with regards to a noise assessment of the condensing units. The metal containers and condensers are in-situ as shown in Figure 1. Some of the condensers have been in place since 2013.

Figure 1: Metal containers and condensing units at 49 High Street, Bognor Regis



The nearest noise sensitive receptor is the first-floor accommodation of 51 High Street. There are four existing condensing units mounted to the rear wall, near the window of this property as shown in Figure 2. The noise at this window is dominated by these 4 existing condensers associated with 51 High Street.

Figure 2: Condenser units to the rear of 51 High Street, Bognor Regis and window location



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3.0 Noise Assessment

Given the nature of the noise (which is dominated by the existing plant serving no 51) and the location of the property, a shortened noise survey was agreed by the Environmental Health Officer. We therefore measured noise between 21:30 hours to 22:30 hours

The operators of EU Supermarket Ltd confirm that condensers A and B are for the main chiller, C and D are for the freezer, E and F are for the chiller for the meat counter, G is for the fridge and H is for the walk-in fridge (container) which is located outside of the shop.

The operators of EU Supermarket also confirmed that for the main chiller (A & B), meat counter chiller (E & F) and freezer (C & D), only one of the units will operate at any given time as they are on a relay system.

Noise from the condensers at 49 High Street have been assessed based on the methodology set out in BS4142:2014. I noted that when all the condensers at 49 High Street were off, the noise 1m from the window was dominated by condenser noise from 51 High Street, which itself is tonal and intermittent, so no character correction needs to be applied to no. 49's condensers.

Table 1: Plant noise assessment (present layout)

Description	Noise Levels	Comments
1 - Ambient noise level	59 dB L_{Aeq}	All condensers from 51 High Street and plant A, C, E, G and H at 49 High Street running.
2 - Residual noise level	57 dB L_{Aeq}	Condensers at 49 High Street off and 51 High Street on.
3 - Background noise level	56 dB L_{A90}	Condensers at 49 High Street off and 51 High Street on.
Specific noise level	55 dB L_{Aeq}	Logarithmic subtraction of ambient (1) and residual (2) noise levels
Acoustic feature correction	0 dB	Same degree of tonality and intermittency
Rating level	55 dB	Specific noise level + acoustic feature correction
Rating Level minus background level	-1 dB	Predicted impact = Low impact

BS4142:2014 states that where the rating level does not exceed the background sound level, this is an indication of the noise source having a low impact.

The two noisiest condensers (A and B) are located closest to the window. It may therefore be prudent to move these two condensers further away from the window, eg. further down the wall (to increase the acoustic screening, or to the other end of the building (ie on the wall of 47 High Street)). My calculations

Appendix A

Survey Details

A1. Location of Survey

49 High Street, Bognor Regis

A2. Date & Time of Survey

24 May 2017, 21:30 to 22:30 hours

A3. Personnel Present During Survey

Jody Tan SRL Technical Services Ltd

A4. Weather Conditions during Survey

Dry and calm

A5. Instrumentation

Bruel & Kjaer

Type 2250 Sound Level Meter (SRL 2250 Purple, SRL No: 519) (serial no. 2559287)

Type 4231 Calibrator (SRL No:520) (serial No:2564290)

A6. Calibration Procedure

Before and after the survey the measurement, apparatus was check calibrated to an accuracy of ± 0.3 dB using the type 4231 Sound Level Calibrator. The Calibrators produce a sound pressure level of 94.0 dB re 2×10^{-5} Pa at a frequency of 1 kHz.

A7. Survey Procedure

Noise levels were measured at 1m from the window of the NSR and 1m from condensers at 49 High Street as shown on Figure 1. The measurements are tabulated in Appendix B, and explanations of the parameters used are listed in Appendix C.

Appendix C

Noise Measurement Parameter Definitions

L_{A90} - The "A" weighted sound pressure level that is exceeded for 90% of the measurement period. It is commonly used as the "Background Noise Level".

L_{Aeq} - The "A" weighted equivalent continuous sound pressure level. A representation of a continuous sound level containing the same amount of sound energy as the measured varying noise, over the measurement period. It can be considered as the "average" noise level.