

EPL: 6266

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BDA Partnership
Woodstocks
Perks Lane
Prestwood
Bucks
HP16 0JQ

THE
EQUUS
PARTNERSHIP

Member of the Association of Noise Consultants

CONSULTANTS IN
ACOUSTICS

Park House
Greenhill Crescent
Watford Herts WD18 8PH
Telephone: 01923 213625
Fax: 01923 213863

89 WHITFIELD STREET - LONDON W1T 4HQ

NOISE ASSESSMENT REPORT

1.0 INTRODUCTION

It is proposed to install a new roof mounted air-handling unit and air-cooled condenser unit. The London Borough of Camden have requested that an assessment of atmospheric noise emissions from the proposed new plant items is undertaken in order to ensure the amenity of neighbouring properties is not compromised.

The Equus Partnership Ltd has therefore been commissioned to undertake a noise survey to establish existing background noise levels at the site, to discuss The London Borough of Camden's standard noise control policy regarding noise emissions and to assess noise emissions from the proposed plant in light of these requirements.

2.0 SITE LOCATION

The subject premises comprise a large six storey office building which, together with the adjoining office building which is a similar nature and scale, occupy the entire block bounded by Whitfield Street, Howland Street, Charlotte Street and Chitty Street. There is a ground floor courtyard in the centre of the block occupied by a separate three storey building in which there is a wine bar/restaurant. The adjoining building and those on the opposite side of the surrounding streets appear to be office accommodation, with the exception of a public house (The Carpenters Arms) on the opposite side of Whitfield Street at the junction with Howland Street. This comprises a three storey building and which appears to have residential accommodation on the upper floors, the closest windows of which are approximately 50m from the proposed plant location, and this is taken to be the closest neighbouring residential property. The nearest neighbouring commercial building appears to be the offices on the upper floors of the adjoining building, the closest windows of which are approximately 18m from the proposed plant location

The proposed plant location is on the fifth floor roof as shown on the BDA Partnership drawing number 931/100, and is substantially screened from the windows of upper floors of the public house by the adjacent lift motor room construction and by the edge of the roof of the subject premises.

2.0 PROPOSED PLANT

The proposed plant comprises one Daikin RXYQ18P air-cooled condenser unit and one air-handling unit. The manufacturer's noise data for these items are summarised on the attached schedule *6266/PN1*.

3.0 ENVIRONMENTAL NOISE SURVEY

The plant is required to operate between the hours 08.00 to 20.00, therefore in order to determine the current background noise levels, a critical period environmental noise survey was undertaken between 16.00 and 20.00 on 18th September 2006.

The noise level was measured at a location on the roof of 89 Whitfield Street, with the L_{Aeq} and L_{A90} values being recorded over consecutive 15 minute periods. Please refer to *Appendix A* for an explanation of the acoustic terminology used above.

3.1 Instrumentation

The following instrumentation was used for the survey:

Brüel and Kjær Precision Sound Level Meter	Type 2260B
Brüel and Kjær ½" Condenser Microphone	Type 4189
Brüel and Kjær Sound Level Calibrator	Type 4230
Brüel and Kjær ½" Windshield	Type UA 0237

The sound level meter was calibrated prior to the survey and the calibration was checked upon completion. No drift was found to have occurred.

3.2 Survey Results

There are significant quantities of plant items located on the roofs of the adjoining building, on those of the surrounding buildings, and also in the central courtyard, and noise from these was noticeable throughout the survey period. Noise levels were also influenced by traffic on the surrounding streets. The lowest background noise level measured was 55 dB L_{A90} .

The weather during the survey was mild and dry with light winds.

4.0 ACOUSTIC DESIGN TARGETS

The nearest residential accommodation is located on the upper floors of the public house on the opposite side of Whitfield Street.

The London Borough of Camden's standard planning condition requires that atmospheric noise emissions from new installations should be at least 10dB(A) below the lowest background (LA90) sound level when assessed at 1m from the nearest residential window, and at least 5dB(A) below the lowest background (LA90) sound level when assessed at 1m from the nearest commercial building window. Based on the results of the environmental noise survey this would equate to criteria of 45 dB(A) and 50 dB(A) to be achieved at the identified locations, respectively.

5.0 ASSESSMENT

Based on the manufacturer's plant noise data and acoustic design targets outlined above, an assessment of noise emissions from the proposed plant items has been undertaken. Due allowance has been made for the distance between the respective plant locations and the identified neighbouring properties, and any losses due to screening etc.

With both plant items operating the noise level is calculated to be 24 dB(A) at the nearest window of the public house, and 43 dB(A) at the nearest office window of the adjoining building. These values are 31 dB(A) and 12 dB(A), respectively, lower than the minimum measured background sound level of 55dB LA90 measured during the environmental noise survey.

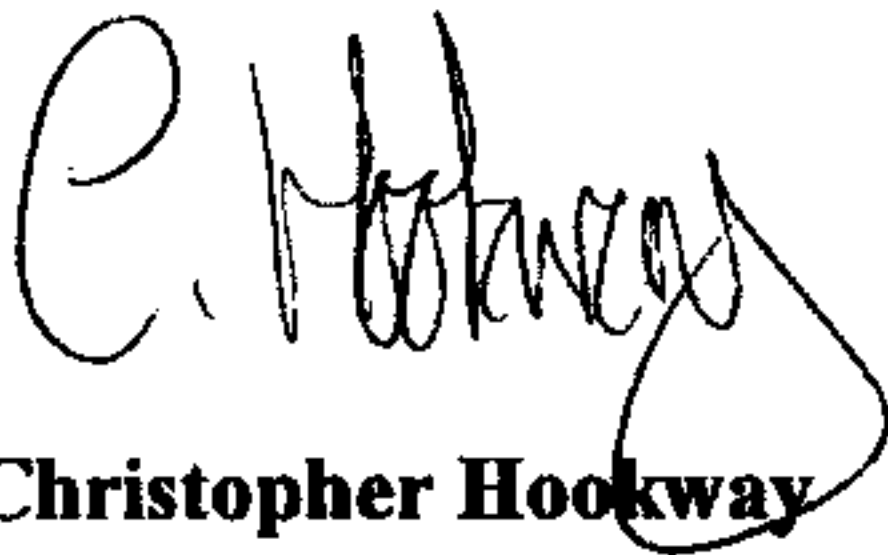
It is therefore concluded that noise emissions from the proposed plant will fully comply with the Local Authority's noise requirements.

6.0 CONCLUSIONS

A critical period environmental noise survey has been undertaken in order to establish prevailing background noise levels around the site.

Based on manufacturer's noise data for the proposed new units, noise emissions to the identified nearest residential and commercial properties have been assessed.

Calculations confirm that noise emissions will be adequately controlled in accordance with the The London Borough of Camden's standard noise control policy for new plant installations.



Christopher Hookway

THE EQUUS PARTNERSHIP LTD.