



Assessment of light well noise

McDonalds
Cambridge Circus
London
WC2H 8AA

Client:

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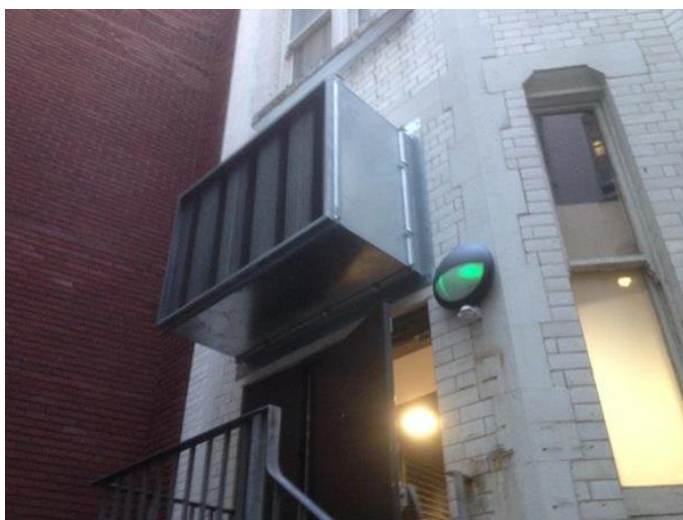
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1 Introduction

McDonalds have recently opened a new restaurant at 24 Cambridge Circus following the granting of planning approval, by Camden Council for the “installation of 11 condensers and a kitchen extract at roof level with associated ducting and acoustic screening” (planning reference No. 2014/6633/P).

Part of the works carried out by McDonalds was the installation of a fresh air inlet duct over their fire exit into the light well at the rear of the premises as well as a small wc extract louvre, as shown in the photographs below;



These works were not detailed on the application drawings and now Mr John Sheeny Senior Planning Officer for Camden Council has requested that any retrospective approval for these works would be subject to providing details of the noise emission from this plant and has stated that *“the survey work will need to be over two separate 24-hour periods. One measuring the plant from the nearest sensitive window against background noise; the other one from the same window, with the plant in operation over a 24-hour period.”*

This report sets out the details of the noise survey I have recently undertaken on site with the plant running and with it off.

2 Sound Survey

I attended site and set up a Rion NL52 sound level meter with a remote microphone on a boom placed just below the bay windows on, what I believe is the first floor flat over the crew room fire exit door. The table below details the equipment used;

Location	Meter Make	Model	Functionality			Serial No.	Due Calibration date
			logging 5 min	200 Lp	audio		
Boom	Rion	NL52	✓	✓	✓	00253718	19/06/2017
calibrator	Rion	NC74				34794316	26/01/2017

The photograph below shows the boom/microphone strapped to the side of S1 intake silencer;

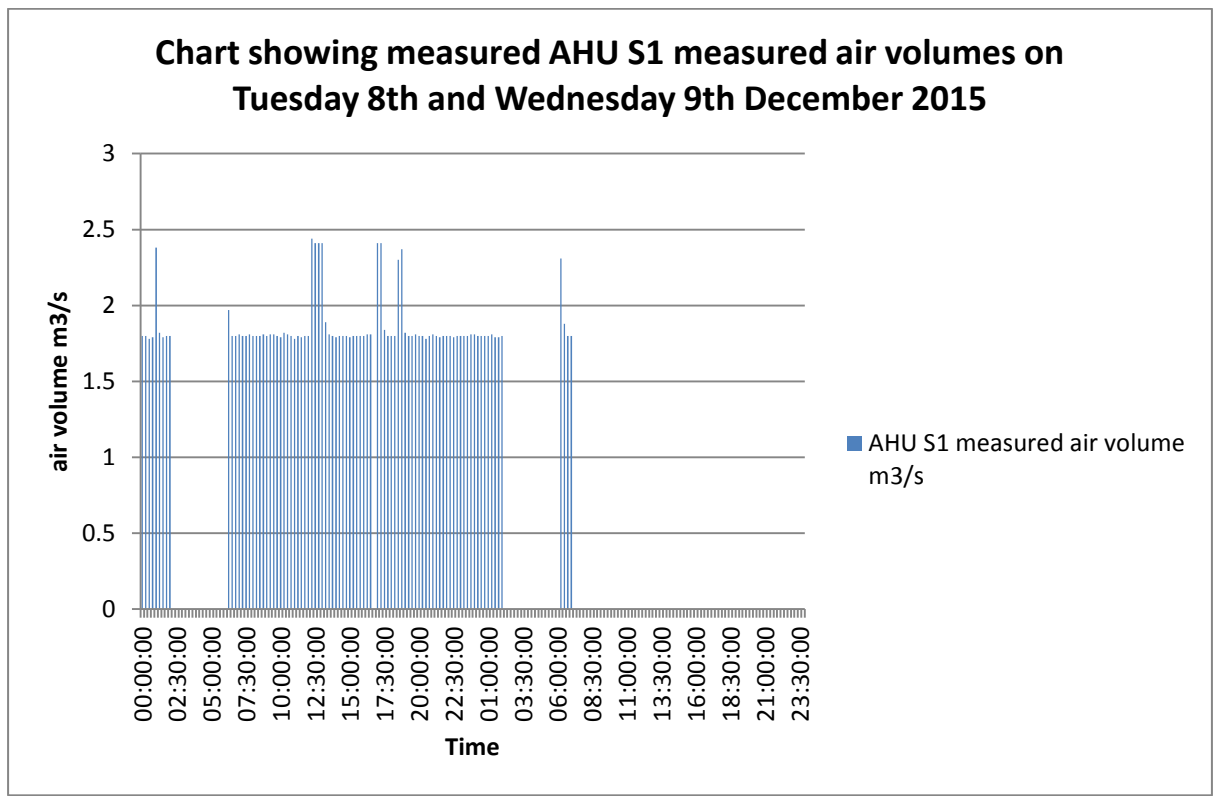


The meter was set to record noise indices over 5 minute periods as well as sample audio recordings of 1 minute in every 10 minutes. The meter was calibrated with Rion NC74 calibrator before and after the survey and no variance was observed. During the survey period of Tuesday 8th and Wednesday 9th December the plant AHU S1 and the toilet extract fan were monitored and controlled remotely.

The usual running time of the plant is that it starts at 6am each morning and then switches off at 2am and this was the case on Tuesday. On Wednesday the plant was brought on for the hour from 6am, so that its impact could be assessed when the other plant in the light

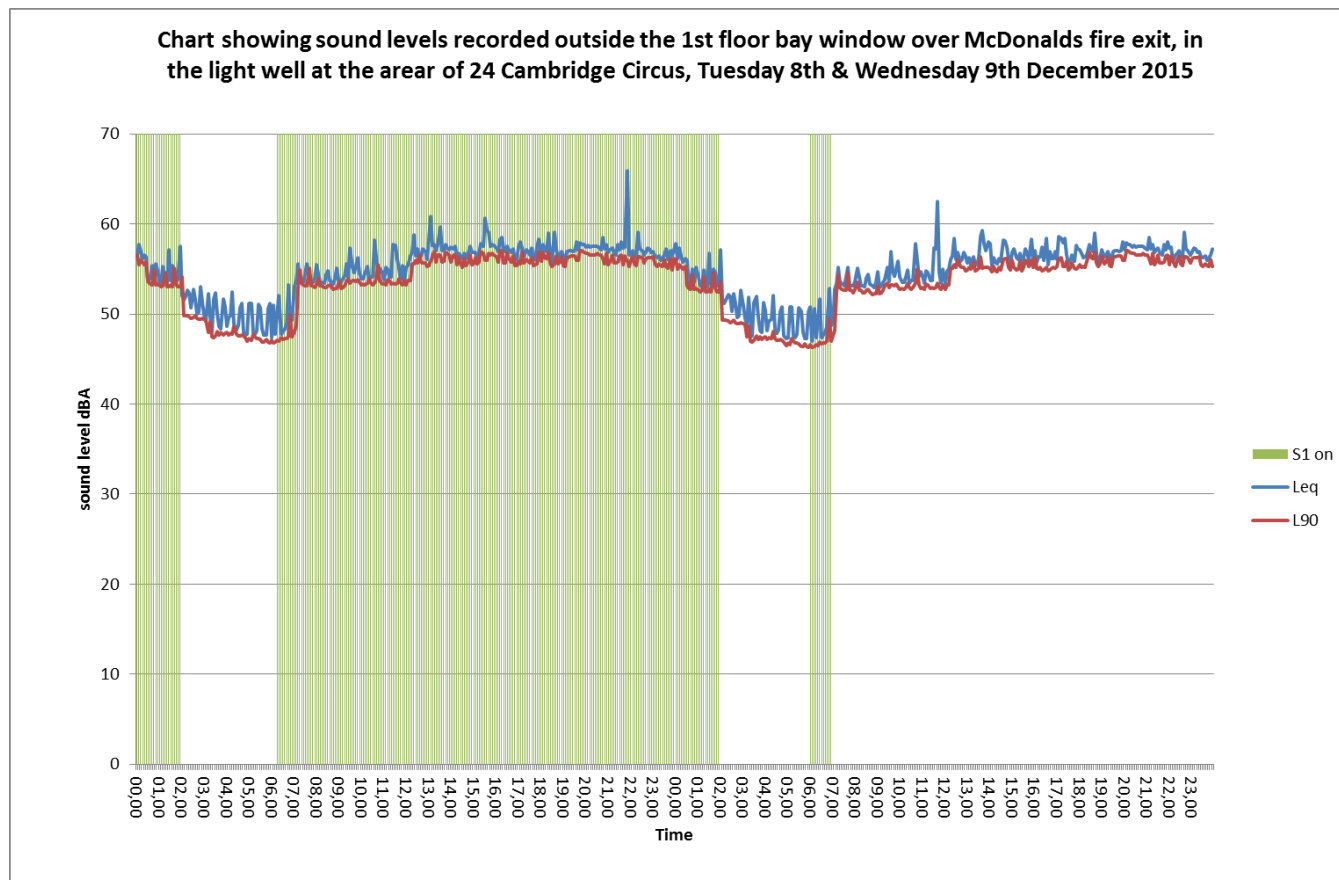
well, belonging to the neighbours, was at its quietest. The plant was then switched off for the rest of Wednesday.

The chart below shows the running times and actual air volumes of the plant;



When I set the meter up I also checked sound levels with the plant running and again when I switched it off manually. Turning the plant off made no difference to the levels recorded (56 dB L_{Aeq,5minute}) which was consistent with not being able to hear it running or not, when stood directly underneath S1 intake silencer on the fire exit.

The chart below shows the sound levels recorded as well as the running times of the plant overlaid on this;



This shows;

- Sound levels in the light well repeatedly dropped between 2am through to 7am,
- The running of McDonalds for an hour at 6am on Wednesday morning had no effect at all on the sound levels even when the neighbours plant was off,
- The noise from the operation of McDonald's plant is at least 10 dB below the minimum background sound level,
- Other plant, not belonging to McDonald's, in the light well control sound levels from 7am in the morning

3 Camden Council's Noise requirements

Camden Council Development Policies 2010-2015 contains DP28 which sets their requirement for the control of plant noise and provided this is non-tonal requires it to be limited to background (L_{A90}) – 5 dB when measured 1m from external to a sensitive façade.

Because the operation of McDonald's plant, within the light well, has been showed to have no influence on the background sound level it can be concluded that it must be operating at least 10 dB below the minimum background. Consequently it can be seen that the McDonald's plant is compliant with Camden's noise policy.

4 Summary

As required by Mr John Sheeny Senior Planning Officer for Camden Council a two day noise survey has been carried out, with McDonald's plant on for one day and off for the next. Sound levels were monitored close to the first floor residential windows, looking into the light well, directly over the fire escape from McDonald's crew room.

The operation of McDonalds has been shown to have no influence on ambient sound levels within the light well, even in the early hours of the morning when the neighbour's plant is quiet.

I have also carried out witnessed tests and can confirm that I was not able to hear whether the plant was running or not within the light well.

This confirms that the plant currently operates within the noise limits set by Camden Council Development Policies 2010-2015 as set out in DP28.

Written by;

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