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Date: 13/02/2015

Borahurst Ltd
75, Bell Street
Reigate
Surrey RH2 7AN

For the attention of Andy Hall

Our ref: 250122

Dear Sirs

Re: 12, 13 & 14 Bloomsbury Square - Relocation of No.12 & No.13 External Condenser Roof Plant .

Please find below our revised plant noise assessment with regards to the re-location of the two number Daikin REYQ44Pcondenser units.

All comments to be read as an addendum to the Allaway Acoustics Report No.32392/MF Section 4(as below).

For the purposes of the Allaway report the units were originally mounted either side of a roof chimney stack on the boundary of No.12 & No.13 and were in a direct line of sight to the two nearest receptor walls.

Also, the manufacturers published, maximum, noise data of 65dBA at 1metre(76dBA at source) was used as the basis for the acoustic assessment.

In the interim the units have been moved approximately 6 metres East across the roof and positioned either side of 2.4metre high wall and between the 3metre high raised 'pyramid' roof sections of No.12 and No.13.

The distance from the units to the nearest adjacent sensitive facade is now 8metres(7metres to a point 1metre from the nearest affected facade) but without line of site due to the adjacent 'pyramid' roofs.

The additional screening effect of the adjacent 'pyramid' roof sections has been calculated at approximately -4dBA

The condensers have, also, been electronically down-rated such that their current, maximum, radiated noise level is now 50dBA at 1metre(61dBA at source).

The distance correction for the current 7 metre distance across a flat plane roof would be 26dB minus 6dB for the reflective effects of the supporting wall(-20dB nett).

Any backwards reflective effect, off the pyramid roof structures, has been ignored as it is not possible to accurately quantify but it will definitely be of some benefit.

As a consequence of all of the above measures the, currently, predicted noise levels at the 8metre distance facades will be:

61dBA at source minus 4dBA roof screening minus 20dBA distance correction = 37dBA at the boundaries.

As stated below, in the Allaway assessment report, the target at the noise sensitive boundaries is 42dBA.

Therefore, the current condensers noise impact, based on the above calculations, should be below the recommended noise targets by a margin of approximately 4-5dBA.

Extract from Allaway Acoustics Report – 32392/MF.

4. Plant noise assessment

4.1 The minimum background (L90) noise level measured between the hours of 07:00am-07:00 pm (plant operating hours) was 52dB(A).

4.2 In order that any proposed new plant noise does not increase the existing noise

levels it must be at least 10dB(A) lower than the current measured level (including consideration to a 5dB acoustic features correction as necessary).

4.3 To this end, we would recommend that a limit of 42dB(A) be set as the plant noise limit at 1m external to the nearest sensitive façade”

We trust that the above explanations and computations are self explanatory but should you have any questions regarding the above please contact us as below.

Yours faithfully



Geoff Davison M.I.O.A.

NOICO LIMITED

