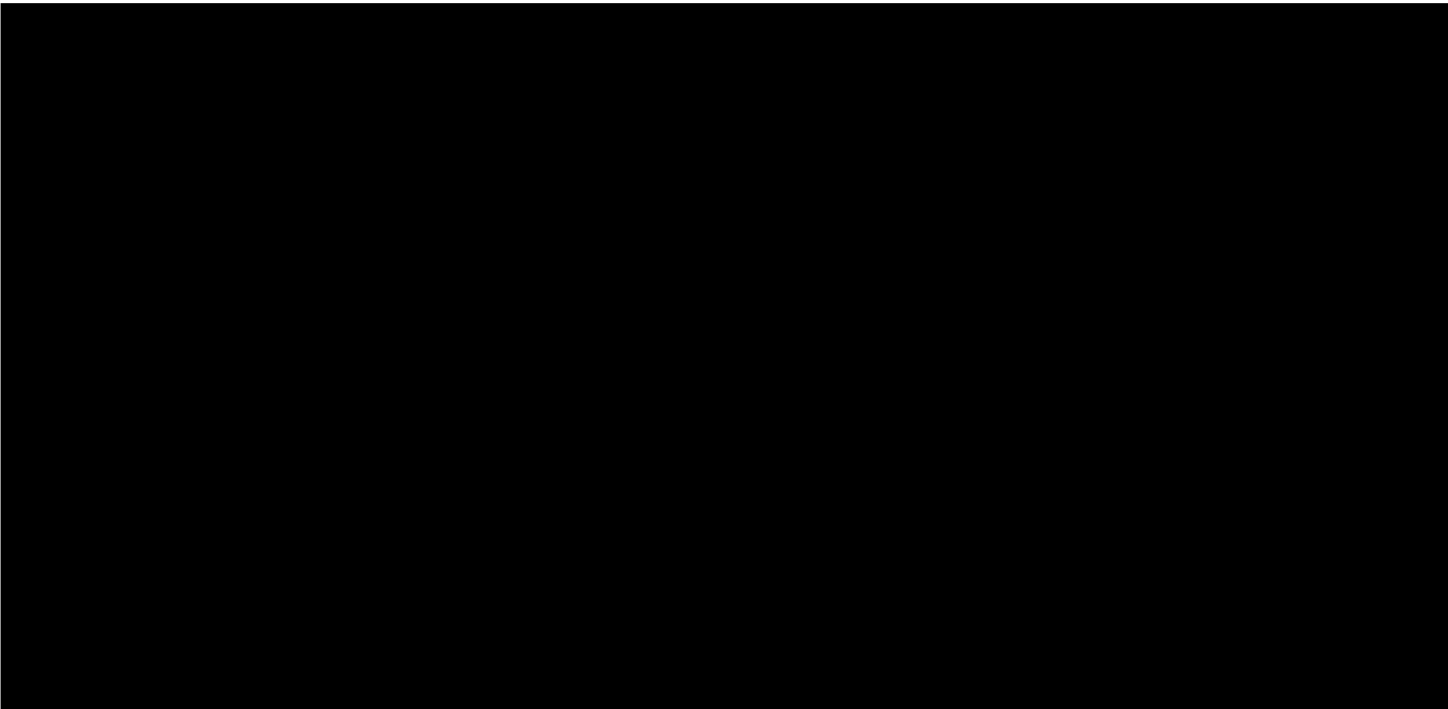




From: Scott Castle <[REDACTED]>
Sent: 20 September 2019 12:00
To: Carol Reynolds <[REDACTED]>
Cc: Anita Gardner <[REDACTED]>; [REDACTED]; Sue Shelley
<[REDACTED]>
Subject: RE: 22 Beach Road, Littlehampton.
Importance: High

Morning Carol

Further to your email below, I have been in conversation with the client and he has agreed to fit the acoustic trickle vents to the windows as described in your email to ensure sufficient ventilation.

I have therefore amended the report to include this and also the comments made in our initial email exchange to ensure that the report reads correctly. The amended report is attached.

I would be grateful if you would confirm in writing that you are happy with the submission and have the details you require.

Upon receiving the confirmation and agreement from Anita regarding the issue of external trickle vents being acceptable, the client will proceed to fit the required vents.

Please do not hesitate in giving me a call, however, please note that after today I am out of the office and return on Monday 30th September 2019.

Kind regards

Scott

Scott Castle (MCIEH CEnv, MIOA)

Senior Consultant

Acoustic Associates Sussex Ltd.
& Sound Solutions Products Ltd.



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From: Carol Reynolds <[REDACTED]>

Sent: 04 September 2019 08:03

To: Scott Castle <[REDACTED]>

Cc: Anita Gardner <[REDACTED]>; [REDACTED]

Subject: FW: 22 Beach Road, Littlehampton.

Dear Scott,

Thank you for your contact and further enquiry 28th August. Apologies in that I have been unable to get back to you more quickly since I have been on annual leave.

Thank you for your clarification. I confirm that this Department will be willing to accept the current provision of windows insofar as each habitable room in Flat 1 and facing Beach Road in Flats 2 and 3 will be provided with acoustically attenuated ventilation as described in your correspondence below. Having discussed this with Principal Planning Officer, Anita Gardner, then please be advised that this will also require the agreement of the Planning Department where such provision may affect the external appearance of this building, before any application for discharge of Planning Conditions can be agreed. Anita has requested detailed building elevations showing proposed changes to any window or building façade.

In respect of your report, 23rd August, page 3, paragraph 3 then to clarify, my comment related to **Figs 6 & 7** and **Flat 1** where daytime noise was found to be 28.8 with windows closed and therefore 39 to 44dB with reasonable adjustment for an open window.

In conclusion, I am agreeable to the additional information which you have provided which should be added to your original acoustic report.

Please do not hesitate in contacting me should I be able to provide further assistance.

Kind regards
Carol

From: Scott Castle <[REDACTED]>
Sent: 23 August 2019 16:19
To: Carol Reynolds <[REDACTED]>
Cc: Darren Godfrey <[REDACTED]>
Subject: 22 Beach Road, Littlehampton.
Importance: High

Dear Carol

I trust that this finds you well.

I write further to the client providing me with your feedback on the AASL acoustic report dated 6th June 2019 for the above site.

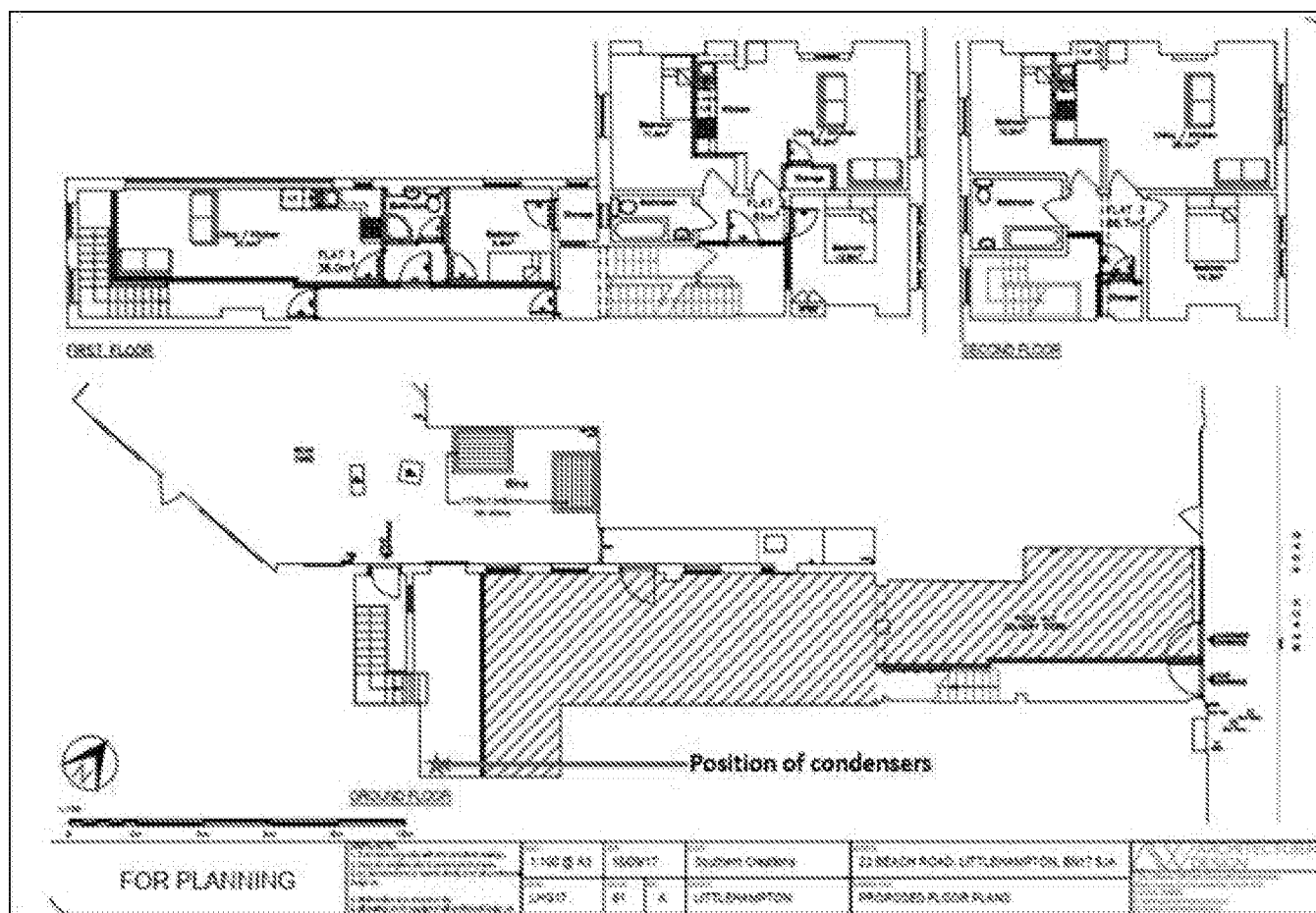
Having studied the online comments and the overall recommendation not to discharge the condition, I have the following points to make and if you are happy, these can be inserted into the report and the report reissued accordingly.

1. The condenser unit for the Walk in chiller.

The condensers were previously located below the bedroom window but have since been relocated to inside the rear garage unit at the very rear of Flat 1, outside the demise of the flat.

The condensers are mounted on anti-vibration mounts on the ground floor. Both the garage and the pizza hut ceiling were soundproofed at the same time. The condenser positions inside the garage void are shown below.

The condensers would have run as part of the survey and are contained with the survey data.



2. Flat 3 and the Pizza Hut Termination/Discharge Point.

Flat 3 is located on the second floor with the extract ductwork passing at exactly the same position as the first floor, where the flat 2, rear bedroom was examined.

The top flat is closer to the termination point which discharges, upwards, well above the 2nd floor windows.

However the first floor window was considered worst case due to the more enclosed nature of the first floor at the rear of the building (reflections from flat roof and walls) and the fact that the first floor windows were closer to the kitchen extract plant.

A further reason, which informed the decision to survey the first floor, was to ensure that direct noise transfer, through floor from kitchen/customer areas, was also at an acceptable level.

A site photograph below shows the existing ductwork and importantly that the termination point is well away from the bedroom window and above eaves. Whilst present on site, Flat 3 was visited and subjectively listened to, before determining where to set up the various survey instruments. The rationale behind the selection of survey positions was already detailed within the report.



3. Reverberation Times

The reverberation times were measured in each of the locations where the surveys were undertaken. As noted from Table 3 in the report, the front bedroom in flat 2, was considerably higher in terms of reverberation than the smaller two bedrooms measured. As per Figure 4 of the report, the image displayed on the left hand side shows the laminated floor already laid.

When the bedroom is lived in and furnished with curtains, beds, pillows and duvets etc, the reverberation time will inevitably decrease and in this case a final reverberation time of 0.5s as was used in the calculations (This is what the Building Regulations state will be the average reverberation time for a furnished room). In this instance the correction used was 3dB as the empty surveyed rooms had an average reverberation time of 1s

Figures 6 and 7 in the report relate to Flat 1, however the references to 39 and 44dB relate to Flat 2, front bedroom, which is reported in Figure 10.

4. Relaxed Criteria from BS8233:2014

BS8233:2014 stated as follows in Note 7 under 7.7.2:

"Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved."

The only concern within the report is that of the window facing Beach Road of Flat 2 for the daytime period. The night time period clearly meets the criteria of BS8233:2014 of 30dB $L_{Aeq, 8 \text{ hour}}$ measured over the 8 hour night.

Having applied the reverberation time adjustment for Flat 2, for the front bedroom and when compared against the complete 16-hour periods, the BS8233:2014 criteria is only exceeded by 1.3dB. It is therefore questionable as to how long an individual spends in their bedroom for the daytime 16-hour period. As per BS8233:2014 referenced above, a relaxation of 5dB will still allow reasonable internal conditions.

It is also relevant to consider that had we been engaged at the design stages earlier in the project, we could have provided a greater specification for windows and/or ventilation. However, the job was commissioned at the end of the build to measure the resulting internal soundscape, which does meet BS8233:2014.

5. Ventilation and Opening Windows

Whilst I appreciate the comments, the condition in question, which is condition 4 states as follows:

Prior to occupation of the flats hereby approved an acoustic report based upon actual readings on site, which demonstrates that the internal noise levels of the proposed residential units will conform to indoor ambient noise levels for dwellings as specified within BS8233:2014. Guidance on Sound Insulation and Noise Reduction for Buildings shall be submitted to and approved by the Local Planning Authority. The details shall include any mitigation measures which may prove necessary to be specified. Any works specified in the approved scheme shall then be carried out in accordance with the approved details prior to occupation of the premises and retained thereafter to the satisfaction of the Local Planning authority.

Approved Document F which relates to ventilation states that where background ventilation is not present, it is best practice (as opposed to mandatory for a new build) to either install trickle vents or provide an alternative means of background ventilation, ie a partially opened window. A cracked open window, such as that in Flat 2 rear is in excess of the suggested criterion (5000mm²).

It is also relevant to note that there remains air entering the first and second floor properties, both living areas and bedrooms overlooking Beach Road from the fully operational chimney breasts and fireplaces which are present.

Notwithstanding the above, ventilation may easily be applied to the site, where it is required.

Opening the windows in the habitable rooms overlooking Beach Road will clearly elevate the internal soundscape, so an alternative approach is needed.

A recommended additional approach to allow fresh air and ventilation of the Beach road habitable rooms is to consider either through frame window vents or alternatively a through the wall ventilator. Both types of ventilator are extremely effective in providing the flow of air but attenuating sound as it passes through the wall space. Either requirement would need to be "acoustic ventilators". For obvious reasons, any ventilation point should not act as the weak part of the façade element and a rigorous calculation would determine the likely internal sound levels with either a frame mounted acoustic ventilator or through the wall acoustic ventilator applied.

In summary, I would welcome your feedback on the above areas and whether inclusion of these into the report is likely to lead to a favourable outcome for the client with a discharge of condition 4.

Kind regards

Scott

Scott Castle (MCIEH CEnv, MIOA)

Senior Consultant

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& Sound Solutions Products Ltd.



**Acoustic Associates
Sussex Ltd.**



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