

16 November 2009

Office Extra Ltd

## **Preliminary Acoustics Report**

Further to our communications of 11 November 2009, I understand that the acoustics within the open plan office are in need of improvement. From the given information the main issue appears to be a high level of reverberation resulting in an unpleasant quality to the acoustics and elevated noise levels. Since this room involves communication a high level of speech intelligibility is required and it is essential that the reverberation time lowered.

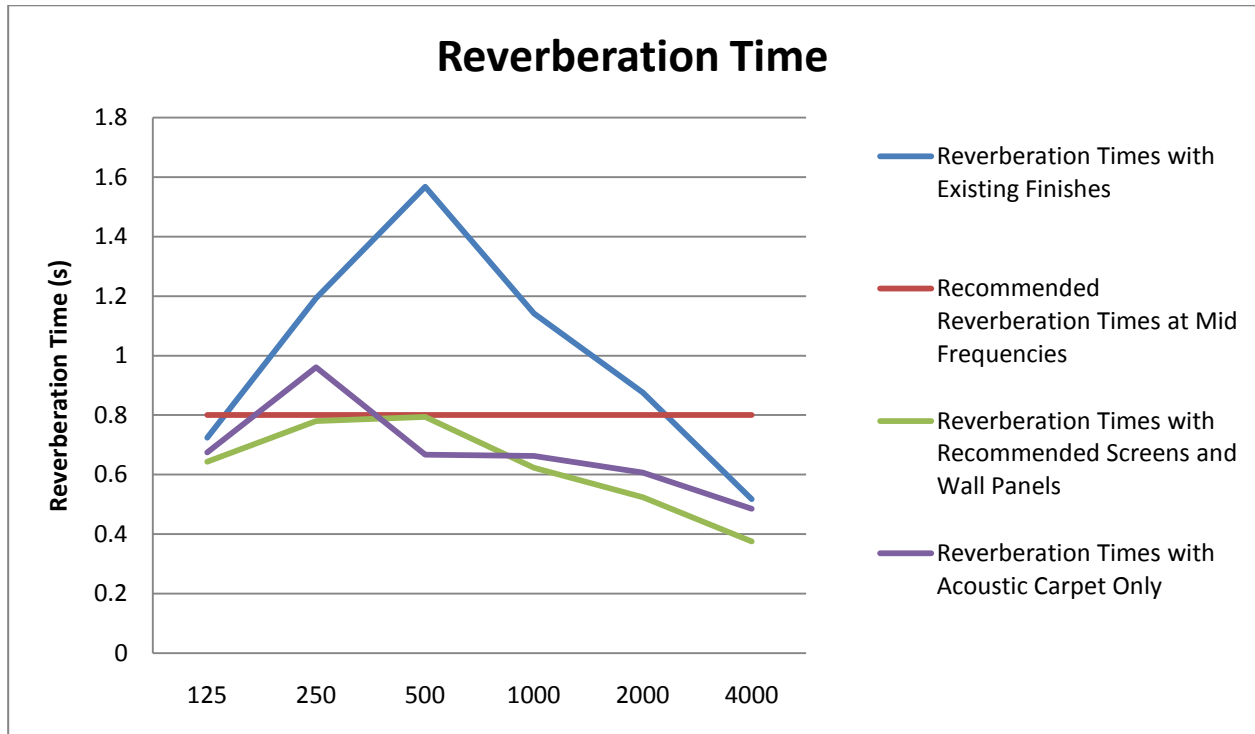
A limited amount of absorption and diffusion is currently provided by the floor, ceiling and walls. The suggested solution includes the use of combinations of acoustic screens and wall panels. The option of an acoustic carpet is also provided.

A reverberation analysis was carried out using the information provided. An exact type of ceiling tile could not be identified, so values of a popular non-perforated ceiling tile were used in the calculation.

### **Reverberation Analysis Results**

The results of the calculated reverberation times at each of 6 frequency bands are displayed on the graph on the following page. These results indicate reverberation times that are significantly higher than the ideal values for the given spaces.

The suggested reverberation times for mid frequencies should fall below 0.8 seconds within this room.



**Results and Recommendations**

1. The results indicate the need for at least 409 acoustic absorption points to be added to the office appropriately.
2. The following finishes are therefore recommended:
  - The addition of 1.5 or 3.2 desk mounted acoustic screens (using Lamapro 40mm acoustic foam at the end of each desk to a height of 580 mm.
  - The addition of 0.4 40 mm acoustic wall panels to be added to the walls in front of the applicable desks to cover a total area of 2 square metres
  - Optional- the addition of an EC Modular Acoustic Carpet to the floor of the office. It is important to note that while the addition of this carpet will control the reverberation in the office, the absorptive surface is not ideally placed for this type of acoustic problem.

Please note: The above suggestions are flexible and alternative solutions and products may be discussed.

Please contact me should you require further information.

Yours Sincerely

Rosalind Lambert-Porter

Acoustician / Audiologist

Acoustics at Work

Note: This is a brief report on findings of Reverberation Time calculations for the above venue. It may not be circulated without the permission of Screens at Work. It may not be used for legal purposes.

