

# Case Study:

## City University, London: Music Department



“The jewel in the crown is the performance space.”

*Mark Bishop, Director, AAD*

City University, London has, within its School of Arts, a small but well respected Music Department, specialising mostly in modern electronic music, but also classical. The department was suffering from very poor accommodation, a mixture of inadequate spaces inherited over the years; it was shoehorned into the basement of the existing old building. Having acquired some finance, the department decided on a complete refurbishment, and wanted it done quickly so that the funds could be spent within the financial year.



***The performance area***

The building originally had a lightwell, filled in many years ago, that went down to a basement which used to be an engineering laboratory. Ultimately, the basement was given to the music department, who turned it into a performance/recording space. Compromised by columns that affected sight lines, it was too small, and the acoustics weren't particularly good. Additionally, there were a few small music practice rooms which were acoustically inadequate, and some electro-acoustic studios, used by students studying sound design. There was also a large room for percussion teaching, the Ensemble room, which clearly made a lot of noise that filtered through to other parts of the university. Finally, there was a spare room which served as a 'gamelan' area, where up to 30 various Indonesian bells, chimes, drums etc are played at once, creating a lot of noise which also permeated other areas of the building.

The School of Journalism was an additional part of the refurbishment project; it, too, had very poor facilities and needed its own TV studio for broadcasts where students learn to news read and present.

There are similar radio studio facilities. As acknowledged acoustic specialists, AAD were commissioned to provide the acoustic design associated with all of these dedicated areas. Having recently been responsible for the design of the prestigious Cork School of Music, and with a wealth of broadcasting experience, including BBC, Channel 4, NBC News, Capital and Virgin Radio, and more, AAD were an obvious choice for the University.

The project consisted of chopping all the existing accommodation back to the ground floor, and building a new basement, with lots of steel work, and a higher roof. One of the challenges on the project was that the old building of City University, London has a bell tower, with a bell that chimes every 15 minutes, with substantial resulting noise. Interestingly, the bell is an exact but smaller replica of Big Ben; during the Second World War, Big Ben was decommissioned and put away for safekeeping and the BBC used this bell instead! Keeping the noise from the bell out of the studio was quite a challenge, but it was managed so well that it can't be heard at all.

The large performance space is used for anything from piano recitals to small ensembles or electro-acoustic pieces, as well as recordings; thus the client required the quietest possible environment. "The jewel in the crown is the performance space," explains AAD's Mark Bishop. "It had previously been shoe-horned in to the lightwell area, so together with the architects, we worked out a scheme whereby they could have a room which was twice the height of the previous space. For the acoustics to sound good in the ensemble rooms you need space, and as there was no more floor available, we had to go upwards to get the optimum volume."

Associated with the big performance space, they created a recording studio, a large room with a mixing desk, bigger than normal recording studio so as to accommodate students sitting down and watching demos of how to use a mixing desk. Furthermore, off this are an isolation room and a vocal recording room. The new electro-acoustic studio has very high levels of sound insulation and very low background noise levels.



***The gamelan room***

"The music school now has some very nice practice rooms, which provide high levels of insulation between them," enthuses Mark. "The 'gamelan' room is also a real success; it sits right next to the new performance space. There was much discussion about whether that was the right place to put it because you've got this space that makes a real din, right next door to a space that requires perfect quiet! However, what we've managed to do is give them a facility that provides such a good level of sound insulation, that they can use both spaces simultaneously without any problems."

Equally so with the ensemble room, where the students practice and perform percussion work. All this has been managed using normal building materials, but specified and constructed in the right manner. "Originally, we'd said they needed to construct all these rooms using a dense block-work core, lined internally with secondary plasterboard, to make a room within a room," Mark goes on to explain. "However, the structural engineer worked out that the structure itself couldn't take the weight of all the block-work, so the challenge was to do it all using light-weight materials, which meant using a multi-layered plasterboard wall between the two spaces. And the inner shell of the main performance space is fully isolated."

Another challenge in the big performance space was that because it's designed to accommodate up to 80 people, i.e. musicians and audience, it needed a considerable amount of fresh air to keep cool.

Getting enough air in, but quietly, is always quite a challenge, but one which AAD professionally resolved.

“Other tangible benefits of the design,” points out Mark, “are that, for example, when you’re sitting in the control room, if someone is on the stage in the performance space, you really can’t hear anything. There is a vision window between the two, but that also has an extremely high level of sound insulation.”

The final build also included new offices for university staff so that they can listen to music without disturbing their neighbours, and the School of Journalism, which is now on the ground floor above the basement, has a state-of-the-art TV studio and four excellent radio studios with connected control rooms.

### Example Acoustic Criteria

Room	Services Noise Level	Fabric Sound Insulation	Reverberation Time
<b>Department of Music</b>			
Performance Area	NR 15	85 dB R'w	1.0 to 1.4 s (variable)
Recording Studio	NR 15	75 dB R'w	0.2 s
Gamelan Room	NR 25	85 dB R'w	0.5 s
Electro-Acoustic Studios	NR 15	75 dB R'w	0.2 s
Practice Rooms	NR 25	65 dB R'w	0.6 s
<b>Department of Journalism and Publishing</b>			
TV / Radio Studios	NR 20	65 dB R'w	0.4 s

**Client:** City University, London  
**Architect:** Rivington Street Studios  
**Cost Consultant:** Dobson White Boulcott  
**M&E Consultant:** MEIT Associates