Further to our meetings over the last few weeks and the full day site visit today, regarding acoustic measures that I would recommend for the 1st floor hall, please find the bullet points recommendations.

My background

As you know I have a certain level of expertise regarding this particular field of event design and production.as one of the director/owners of Starlight Design Ltd, which I have been fortunate enough to be part of now for 33 years.

Working on many varied and exciting projects over my time, having the greatest of honours in being part of designing, implementing and delivering the last 4 UK royal weddings, The Queens Silver jubilee firework display on the roof of Buck House!, the last 9 James Bond premiers, all of the Harry Potter premiers and about 200 other world premieres, 4 Raffles hotel Singapore new year's eve parties, 11 of Elton John's "white tie and tiaras balls", Elton and David's wedding, Elle Goulding's wedding, Sting and Trudie's wedding, etc, etc (most of everything else we have had the pleasure on working on, we cannot divulge due to NDA's!)

I have sought the advice of Our Head of Sound, who has worked for us for 18 years and has headed up our sound department for the last 7 years. A very learned and highly renowned sound engineer, having designed, operated installed systems for some of the very best at our very private events.

My recommendations are as follows:

1. Design, commission and installed, high density foam "plugs", High Density Foam GRADE/REF: 38 CHARACTERISTIC APPARENT PIECE DENSITY NOMINAL HARDNESS TENSILE STRENGTH ELONGATION @ BREAK SPECIFICATION 38-40 Kg/m³ 180-220 Newtons 100 Kpa (Min) SPECIFICATION POLYURETHANE FOAM MEETS WITH REQUIREMENTS OF SCHEDULE 1 PART 1 OF THE FURNITURE AND FURNISHINGS (FIRE) (SAFETY) REGULATIONS Physical properties are measured using test methods described in BS EN ISO 845:1995. (Determination of Density), BS EN ISO 2439 (Determination of Hardness) and BS EN ISO1798 (Determination of Tensile Strength and Elongation).to the window reveals on the first floor of the, two south facing windows of the 1st floor main hall and the two west facing window on the 1st floor kitchen and the single north facing window of the kitchen. Each of the acoustic "plugs" to be fashioned from inherently flame retardant, high density foam sheeting 130mm thick.

These plugs to be additionally upholstered in inherently flame retardant, canvas, with 2" thick webbing straps, with "handles" sewn around each "plug cover", to allow ease of install and removal of plugs buy club staff. I have surveyed the windows in question and have specified that the "plugs" are 5mm larger, all the way around each of the window apertures, to ensure a snug fit, as this "compressed", foam fit, increases the efficiency of the db suppression significantly. (please note that the "Snug" fit might well have an adverse effect to the decorative paint finish of the window reveals, but this will hugely added to the sound suppression ability of the plugs if they are "snug". So worth the extra paint work, touch required every so often)

- 2. As an additional measure, design, commission and install substantial heavy weighted, 200% pleated, doubled sided, inherently flame retardant, wool based velour curtains, IFR: BS5867 to each of the windows in the hall.
- 3. The above curtains will be additionally middle lined with "molton", t IFR: BS5867 Class 1 /B1, will wool fabric middle layer, (also IFR treated), to add to the sound suppression, but also have the added benefit of adding further "soft" materials to the interior of the hall, which will add to the improved acoustics of the space, as this will help to suppress the echo, that is prevalent in the space due to the number of hard surfaces.
- 4. The above drapes, will also have metal jack chains, pre sewn into the bottom hems, to ensue that the drapes hang correctly, and give a close fit to the walls around each of the window reveals.
- 5. Also to aid the sound capture, to each of the windows in the hall, I recommend that we dress each of the curtains with a pelmet box. These boxes to be fashioned from 18mm thick ,FR ply, also pre upholstered , The boxes will also have tops, not usually required from a visual perspective, as the top of the boxes are never seen, but worth adding from a sound suppression point of view.
- 6. The windows in the 1st floor kitchen will just have the foam plugs, as the "over drapes", are not practical in a kitchen environment. But have "over sided these again, to ensure a snug fit.
- 7. We do also recommend that a full height drape, fashioned, constructed and installed in the same way, Infront of the kitchen servery hatch, to add to the levels of "soft" materials in the interior of the hall, but have the added benefit of helping to supress any catering and chef noise for our guests enjoying the hall.

8.	While I am on site to oversee the install, more than happy for me and my
	team to check the Roof lantern plugs, while we have the crew and access
	equipment on site and take any further suitable steps if required.

Kindest regards

James Morris Oakes

Production Designer

Director

