London Borough of Hammersmith & Fulham

Licensing Sub-Committee

Supplementary Agenda B

Tuesday 28 May 2024 at 2.00 pm

This meeting will be held remotely

Watch the meeting live: youtube.com/hammersmithandfulham

MEMBERSHIP

Administration:	Opposition:
Councillor Bora Kwon Councillor Wesley Harcourt	Councillor Dominic Stanton

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Public Notice

This meeting will be held remotely. Members of the press and public can watch the meeting live on YouTube: youtube.com/hammersmithandfulham

Speaking at Licensing meetings is restricted to those who have submitted a representation and registered to speak.

Date Issued: 23 May 2024

London Borough of Hammersmith & Fulham

Licensing Sub-Committee
Supplementary Agenda B

28 May 2024

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Date:	22nd May 2024	**Ref:**	E21064 240515 RA TN5a - Venue Sound Insulation

Project: E21064 Future Olympia

Subject: Venue Sound Insulation **Pages:** 5

This technical note summarises the sound insulation measures being taken to protect nearby residential communities from entertainment noise in the new venues at Olympia.

1.0 INTRODUCTION

The development's planning criteria were collaboratively established between Olympia and the London Borough of Hammersmith and Fulham (LBHF). In summary, the proposed methodology, as agreed with LBHF, limits noise emissions from music venues during events to a level 5 decibels lower than the typical background sound level occurring at a 1-meter distance from the nearest noise-sensitive receivers.

In other areas within the scheme where amplified sound is incidental to the use, such as offices, hotel rooms, lobbies, restaurants, and bars without entertainment, as well as circulation spaces and meeting rooms, the noise limit is 10 decibels below the typical lowest daytime and/or nighttime ambient noise level, as appropriate.

On this basis, LBHF were satisfied that occupiers of the surrounding premises would not be adversely affected by noise.

2.0 WEST HALL

West Hall is a new 4,000 capacity music venue.

From the outset, this venue has been designed with sound insulation in mind, some of the country's leading acoustics consultants have worked to achieve very high levels of sound insulation to enable a full live music experience whilst meeting the stringent standards required by the planning conditions and protect the amenity of nearby residents.

The main external wall of the venue has a core of concrete with multiple additional layers both inside and out, and overall is at least 1,100mm thick, as shown in Figure 1 below:

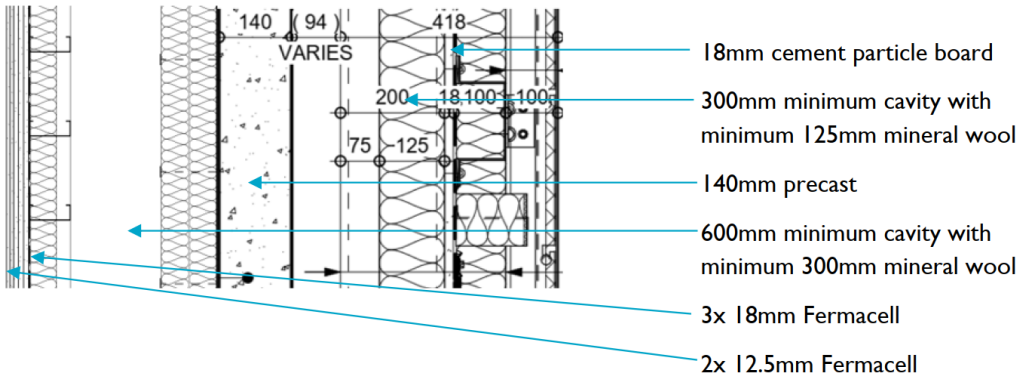

Figure 1 – Main West Hall External Wall

The roof of the venue features a double concrete layer separated by acoustic rubber pads, with a mixture of green roof and crushed stone toppings, these are shown in Figure 2 to Figure 4.

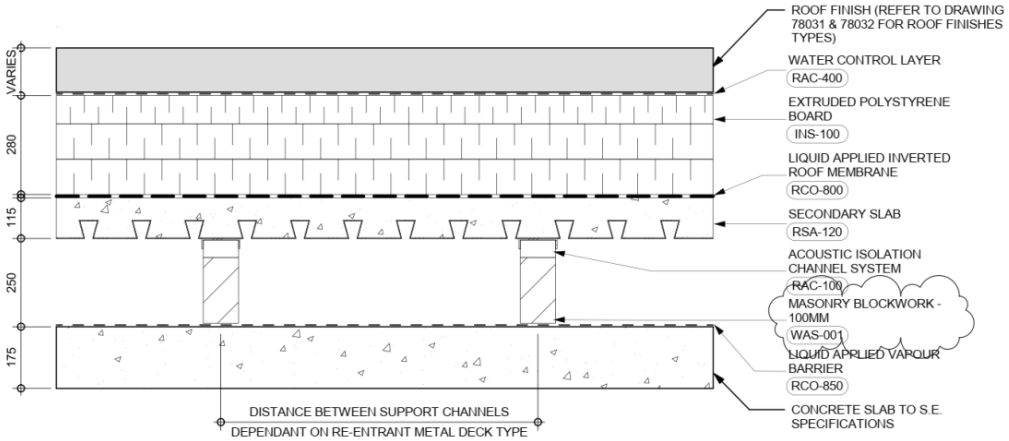

Figure 2 – Main Roof Construction

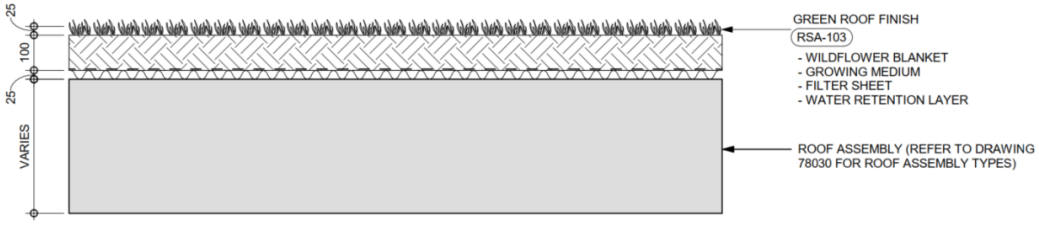

Figure 3 – Green Roof Topping

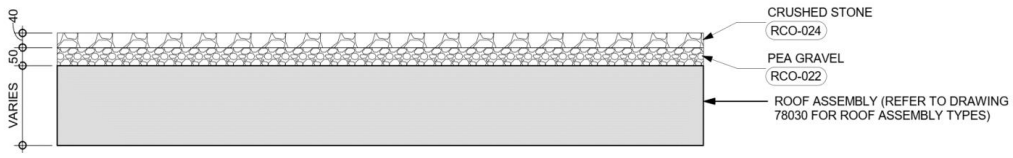

Figure 4 – Crushed Stone Roof Topping

Fire doors open into lobbies with further external metal doors, so there are always double sets of doors to provide high sound insulation from the venue to neighbours, Figure 5.

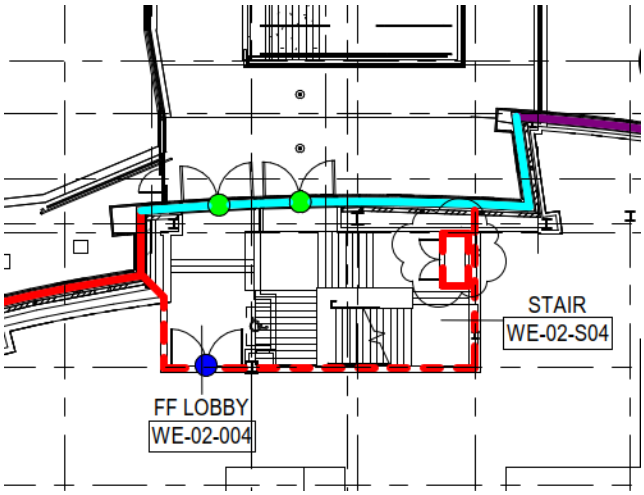

Figure 5 – Typical West Hall Door Lobby

3.0 PILLAR HALL

Pillar Hall is a renewed music venue in a listed building, with the upper part of the building becoming a new music venue and a restaurant below.

The sympathetic refurbishment includes sound insulation for the venue including new secondary glazing for the windows and acoustic treatment to the existing roof and ventilation.

The roof will be upgraded with a new underlining fixed to the rafters, Figure 6.

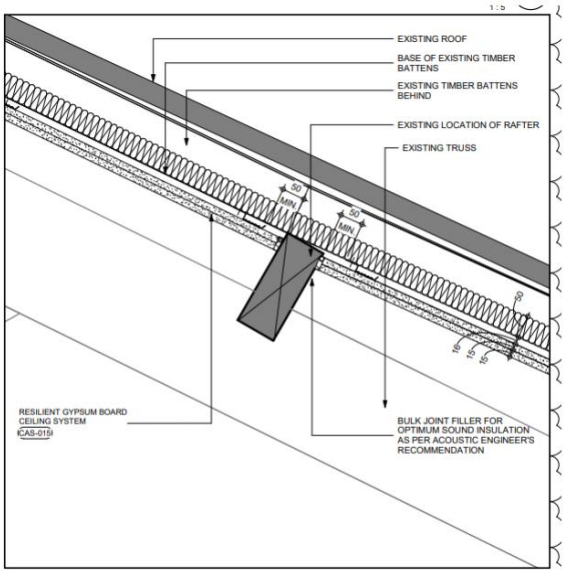

Figure 6 – Pillar Hall Roof Acoustic Treatment

4.0 THEATRE

A new 1,575 seat performing arts theatre is being provided.

The theatre itself sits on rubber bearings to form an acoustic break for noise passing into and out through the structure of the building, shown in Figure 7.

Figure 7 – Theatre Acoustic Bearing

There are office floors above which prevent sound breaking out from the roof of the auditorium and the external walls and fly tower have all been designed to provide exceptionally high levels of sound insulation.

The fly tower has a 200mm composite metal and concrete slab roof combined with acoustically rated smoke vents.

The external wall features a Twinwall pre-cast concrete core (composed of two 65mm thick pre-cast concrete wall leafs) lined with several plasterboard layers in a depth of over 1,100mm, shown below in Figure 8.

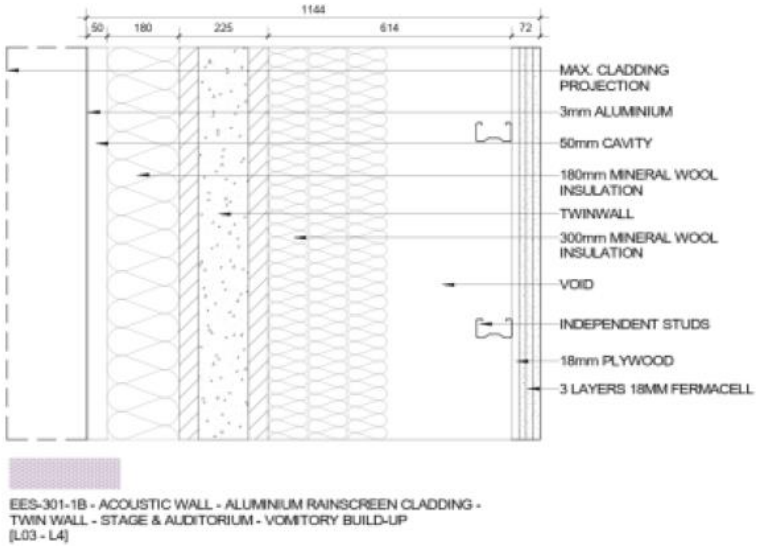

Figure 8 – Theatre Main Wall – Stage and Auditorium

5.0 GYM

The agreement with the gym operator will include acoustic requirements for them to comply with the same noise emission limits at neighbours given in the introduction above, in combination with all other venues.

Gym operators often offer high intensity workouts, with accompanying music, noise levels may be high, and the acoustic design shall be based on a noise survey of existing gyms.

Noise control measures may include any or all of the following:

i. A noise limiting device fitted to any music system, set up at the time of acoustical commissioning.

ii. Sound absorbing treatments (ceilings, wall panels, etc), mass barrier ceilings, or floating structures as part of the fit out to achieve the noise criteria.

iii. Loudspeakers not being rigidly connected to the building structure and mounted on resilient brackets.

6.0 ROOF TERRACE

A combination of the noise control measures listed above may be used to control noise emissions to other internal spaces and also to control noise breakout to neighbours.

The agreement states that noise from uses and activities of the roof terrace shall not exceed the noise limits at neighbouring façades and at private external amenity spaces (including apartments on Russell Road).

This will require control of music on the roof terrace to suitable levels and appropriate management of the use of the terrace.

7.0 SUMMARY

The existing Olympia exhibition halls date from Victorian times and the structures were not designed to accommodate the high noise levels from modern touring bands and theatre.

The new venues have been purpose built with modern materials and from the outset, sound insulation has been an integral part of the Future Olympia design, with care taken at every stage of the process to minimise potential effects on residential neighbours.