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RISK ASSESSMENT RELATING TO NOISE AT WORK

This is a document designed to assess the risks of noise to staff and others involved in installing and operating the sound equipment for the following event.

Event Name: - **The Last Night Of The Proms**
Production Company: - **Partnership Productions**
Location of Event: - **Hyde Park**
Start Date: - **9th September 2008**
Finish Date: - **15th September 2008**
Document Prepared: - **26th August 2008**

System Sound have a duty in respect of its employees and other persons likely to be affected by it's work to, so far as is reasonably practicable, reduce or prevent risks by noise to health and safety. This assessment has been split into six parts.

I have identified three areas around the site that require specific assessment and these have been dealt with individually, based on the exposure limit and action values published in the **Control Of Noise At Work Regulations 2005**.

- (1) The lower exposure action values are—
 - (a) a daily or weekly personal noise exposure of 80 dB (A-weighted); and
 - (b) a peak sound pressure of 135 dB (C-weighted).

- (2) The upper exposure action values are—
 - (a) a daily or weekly personal noise exposure of 85 dB (A-weighted); and
 - (b) a peak sound pressure of 137 dB (C-weighted).

- (3) The exposure limit values are—
 - (a) a daily or weekly personal noise exposure of 87 dB (A-weighted); and
 - (b) a peak sound pressure of 140 dB (C-weighted).

A designated "Quite" area has been allocated to the Sound Office which is located in the back stage compound near the stage right stage access.

PART ONE – POTENTIAL RISKS

Area 1 – FOH position and Auditorium

Sound Personnel at risk –

- i. Sound Designer (Staff)
- ii. FOH Operator (Freelance)
- iii. BBC Liaison Officer (Freelance)
- iv. System Engineer (Freelance)
- v. Network Engineer (Staff)
- vi. General Engineer (Staff)

Possible causes of noise in area:

Plant machinery operation.

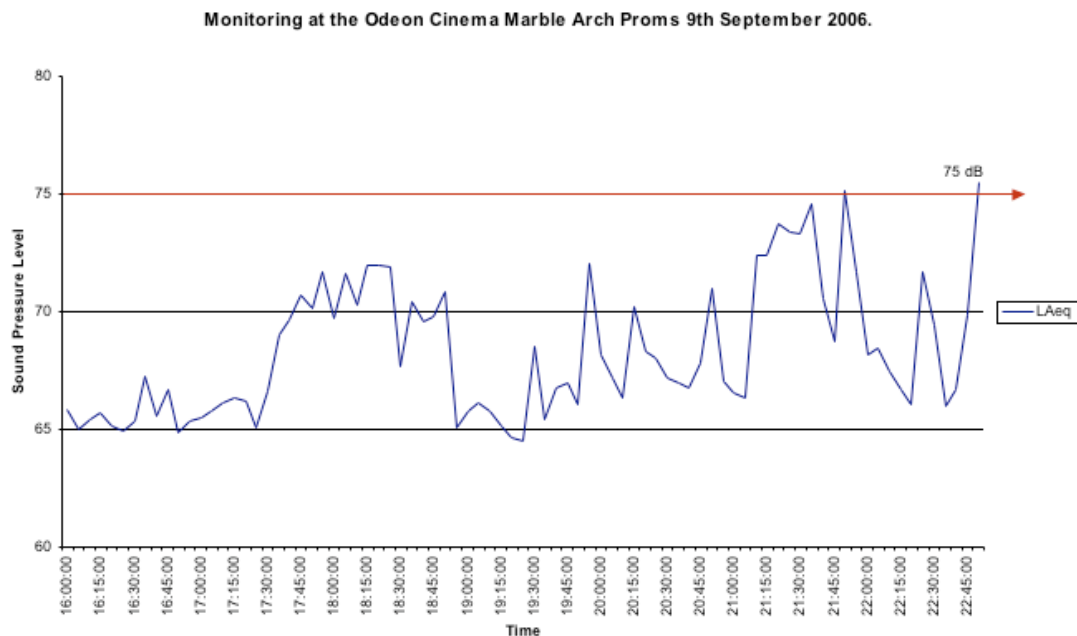
Vehicles occasionally driving past.

Riggers occasionally banging bits of metal against each other.

PA system output.

Of these sources, I feel that only the PA system output gives any source of concern.

The event is monitored by Westminster Council who has imposed a limit of 75dbA over 5 minutes at the nearest residence. We know from experience that we can receive a peak sound pressure at the FOH mix position of up to 104dbA. We know from experience that the levels imposed have, in 12 years never been exceeded by more than 1dbA Leq5. The following chart shows a recording of one the loudest Proms event held in the park in 2006.



The result of the assessment of this area is that peak pressure levels may reach 104dbA and that no person will receive a daily or weekly A weighted noise exposure in excess of 80db.

This area has been assessed to fall into the lower exposure section of the regulations.

Area 2 – On Stage (Not including monitor area)

Sound Personnel at risk:

- i. Monitor Engineer (Freelance)
- ii. Stage Chief (Freelance)
- iii. Stage Crew (Freelance)
- iv. Stage Crew (Freelance)
- v. Splits Master (Freelance)
- vi. Sound Designer (Staff)

Possible causes of noise in area:

Plant machinery operation.

Riggers occasionally banging bits of metal against each other.

Monitor system output.

Musical instrument output.

The areas I have identified as holding a potential risk are restricted to the output of the monitor system and the output of musical instruments.

Most of the staff will be working either under the stage or in the wings and are therefore a substantial distance from the orchestra and monitor speakers.

Some of the crew will at times be expected to work amongst the orchestra for short times. They will also be expected to work in front of the monitor speakers in order to establish correct functionality of the system. The exposure to the speakers and orchestra will be sporadic and for short periods.

The speakers have the ability to produce 133db peaks at 1 metre but are rarely driven at this level. Experience tells us that the speakers will commonly be driven at approximately 60%.

We do not have detailed information available to us regarding the decibel levels an orchestra produces as a whole at any distance, however as the crew will not be exposed close up for anything other than very short periods over a day it is not thought, at this time, that daily or peak levels will exceed those stated in the lower exposure action values table.

That said, we feel that more information should be obtained by some method in order to prove the case. It is known that the BBC will be taking measurements within the orchestra and around the stage in order to compile health and safety information for this event. We will apply to them for that information in order to better assess the risks in future.

This area has been assessed to fall into the lower exposure section of the regulations.

Area 3 – Monitor Desk Area (On Stage)

Sound Personnel at risk:

- vii. Monitor Engineer (Freelance)
- viii. Stage Chief (Freelance)
- ix. Stage Crew (Freelance)
- x. Stage Crew (Freelance)
- xi. Splits Master (Freelance)
- xii. Sound Designer (Staff)

Possible causes of noise in area:

Plant machinery operation.

Riggers occasionally banging bits of metal against each other.

Monitor system output.

Musical instrument output.

The areas I have identified as holding a potential risk are restricted to the output of the monitor system and the output of musical instruments.

The monitor engineer will mostly inhabit this area. Other staff and crew will be in the area periodically but for relatively short periods.

The risk has been identified as being restricted to the output of reference monitor speakers placed in the area in order to replicate the sound occurring in similar units placed on-stage in front of artistes.

The units are not capable of achieving levels exceeding those stipulated in the lower exposure action values chart regarding peak exposure. However, when the effect of the orchestra playing for extended periods due to rehearsals plus the requirement for artistes to also rehearse using the on-stage monitors is taken into account, there is a potential for exceeding a days average exposure of 80db.

The area will be monitored during the day to establish whether it appears that the upper action value limits are being reached, and ear plugs will be placed in the area which must be used by staff and will be recommended to freelancers if the upper exposure values are reached.

The monitor engineer will also be instructed to spend some time in the backstage sound office, which is designated as a quiet area.

This area has been assessed to fall into the lower exposure section of the regulations with a requirement for active re-assessment throughout the day.