Annex U
To Facilities Management Health and Safety Policy

Noise

1. Excessive noise may have adverse effects on exposed staff ranging from physical stress to psychological imbalances.

2. Noise induced hearing loss may vary from fatigue of the inner ear, causing temporary hearing loss to permanent loss of hearing, depending on the level and frequency of the noise. Excessive noise can destroy the ability to hear altogether.

3. We have a legal duty to reduce the risk of damage to the hearing of our workforce in accordance with the Control of Noise at Work Regulations 2005.

4. To comply with The Control of Noise at Work Regulations 2005, Facilities Management will carry out the following: -

    a. Reduce the exposure to noise to the lowest level reasonably practicable.

    b. Carry out a noise specific Risk Assessment where staffs' daily noise exposure is likely to reach 80 dB (A). See Noise Measurement and Action Levels below.

    c. Identify where action is required to reduce the noise levels identified above.

    d. Ensure that employees are provided with, and take reasonable action to ensure the wearing of, personal ear protection where the second action level of 85 dB (A) is reached. Personal Ear Protection will be made available and staff are encouraged to wear it where the first action level of 80 dB (A) is reached. See Noise Measurement and Action Levels below.

    e. Reduce exposure to noise other than by providing ear protection where a level of peak sound power exceeds 87 dB (A). See Noise Measurement and Action Levels below.

    f. Re-assess the risk if there are significant changes to the work or if there is reason to suspect that the assessment is no longer valid.

    g. Provide adequate information, instruction and training to all employees who are likely to be exposed to the first or peak action levels on: -

i. The risk of damage that the exposure may cause.

ii. What steps the employee can take to minimise that risk and what steps FM have taken..

iii. The method of obtaining personal ear protection.

h. The routine process and general Risk Assessments currently undertaken within Facilities management for all tasks, which include a section on noise, will normally be suitable and sufficient to ensure that our duty is discharged.

i. The appropriate selection of hearing protection is paramount to safety, and is essential so that the risk of noise induced occupational deafness is reduced, whilst not overprotecting hearing and introducing other risks. The selection of hearing protection is part of the management procedure for the department and guidance on selection of suitable hearing protection is included below.

j. Where there is the slightest doubt that the action levels are being approached or exceeded, the operative should report the matter to their line manager for specific action and Noise Specific Risk Assessment.

5. Equipment procurement

a. Facilities Management equipment currently in service has been tested to assess noise exposure, having been initially determined using the manufacturers data and any appropriate amendment as to whether ear protection is appropriate for specific tasks should be assessed on a task by task basis.

b. Ear defenders are provided by Facilities Management, and will be issued via your line manager. If you are concerned about sound levels on any equipment please advise your line manager who can then arrange for sound level readings to be taken.

c. Where the procurement of new machinery is being planned, purchasers must ensure that the machinery in question will comply with Annex S to Facilities management Health and Safety Policy by ensuring the following: -

i. The supplier issues a ‘Declaration of Conformity’. This (or a copy) may be requested before ordering where doubt as to conformity exists.

ii. The equipment is CE Marked.

iii. Instructions for the safe use and installation accompany the equipment or machinery and management steps are put in place to ensure the advice given is followed.

iv. Information on background to and noise emissions of the equipment are included, ensuring that the proposed operating conditions of the machinery and the method of measurement employed to determine that the levels are relevant to the situation.

6. Noise Measurement and Action Levels

a. The ear is an extremely robust and accurate instrument capable of detecting a range of sound pressure amplitudes from that equivalent to a mere pin drop to those millions of times higher.

b. In order to allow day-to-day objective consideration and comparison of noise levels likely to be encountered within Facilities Management during building and/or maintenance activities, the following simple guide may be of assistance.

c. Noise is generally expressed as a decibel (dB) representing the pressure exerted by sound waves. Certain filters are incorporated into the measurement equipment in an attempt to reflect the impact that noise has on the relevant receptor. The scale of measurement normally accepted as reflecting the workplace environment is the decibel A scale (dB (A)).

d. There is a risk associated with exposure to any very high sound pressure levels, usually short bursts of noise such as those from impact or explosive events. For this reason you may also need to check if the peak action level of 140 dB is likely to be exceeded at any time during the working day.

e. The exposure of all who, during the course of the working day, may receive an exposure at, or in excess of, the first action level of 80 dB (A), Second Action level, 85 dB (A) or peak sound power 87 dB (A) need to be assessed and dealt with accordingly. This includes those who spend most of the day working at a noisy location, those who may enter noisy areas for short periods, such as care-takers or cleaners, those operating certain grounds/gardens equipment, those who work in certain boiler houses, plant rooms and workshops (e.g. joiners) plus their supervisors, and those whose noise exposure varies from day to day.

f. In order to give an idea of the levels associated with the above action levels, the following guide may be of assistance:-

Jet Engine: 140 dB, Pneumatic Drill : 100 dB, Machine Shop : 90 dB, Busy street : 80+ dB, Speech at 1 metre : 60 dB.

g. As a rule of thumb, sound pressure levels are inversely proportional to the distance from the source. Simply put, doubling the distance from the source will halve the sound pressure level.

h. An increase in the measured level of sound of 3 dB is actually a doubling of the sound intensity. Similarly a reduction of 3dB halves the level. Thus it can be seen that the first and second action levels, although only 5 dB (A) apart represent an almost fourfold increase in level.

i. Where there is the slightest doubt that the action levels are being approached or exceeded, the operative should report the matter to their line manager for specific action and Noise specific Risk Assessments to be undertaken. Noise measuring equipment, including personal dosimeters should be used to determine the level of noise operatives are being subjected to.

j. Noise protection will be categorised into three levels so as to ensure that the management of PPE is adequate and appropriate protection is used as far as is reasonably practicable with all equipment. The noise levels are associated to those advised by the HSE and the noise protection level is calculated using the SNR format.

7. Action required

a. Where assessment indicates noise exposures between 80 dB(A) and 85 dB(A), employees should be advised there may be risk to hearing, and hearing protection made available should they wish to wear it. Low level protection is advised so that over protection does not occur.

b. Where assessment indicated noise exposure above 85 dB(A) or upper peak levels , employees should be advised there is a risk to hearing and that the wearing of hearing protection is mandatory.

c. Based on the recommendations made by the assessment, a programme should be initiated to introduce engineering controls to reduce these noise levels to the lowest level reasonably practicable.

d. Further advice, for example the selection of suitable hearing protection, should be sought from the competent noise assessor. Consideration should be given to the level of noise when selecting new machinery.

e. **Do not use the table below in respect of Plant Rooms, Boiler Houses and other Low Frequency Environments as they contain significant low frequency components and Specific guidance will be issued on these environments**

Table 1 – Noise Measurement and Action Levels.

Facilites Management Noise Protection Levels	**A-weighted noise level (dB)**	**HSE SNR LEVELS**	**HSE 'REAL WORLD' ADJUSTMENT**	**RECOMMENDED SNR LEVELS**
1 – (e.g. Optime I)	85-95	20-30	4dB	24-34
2 – (e.g. Optime II)	95-100	25-35	4dB	29-39
3 – (e.g. Optime III)	100-105	30 or more	4dB	34 or more

HEARING PROTECTION ZONES

Summary Guidance

Where any employee is likely to be exposed to the upper exposure action value or above, this area should be demarcated as a hearing protection zone.

8. Action Required

a. Advise employees that a hearing protection zone is in operation.

b. Enforce the wearing of appropriate hearing protection.

c. Identify hearing protection zones by use of approved signage.

9. Management of Personal Risk

The required hearing protection level will be placed onto equipment in an easy visible format, as indicated in Fig. 1a below. to enable employees to personally manage their own risk.

Figure 1a. Example of Hearing Protection level (combined with Hand-arm Vibration exposure allowance)..

10. Health Surveillance

Health Surveillance in the form of hearing checks, shall be provided for all operatives who are at risk arising from their noise exposure. HSE guidance indicates that this applies to all employees exposed above an upper action value. It suggests that ideally hearing checks would be made before an employee is exposed to noise, and repeated at two or three-yearly intervals, unless a problem indicates more frequent testing is needed.

Figure 1
Managing noise risks

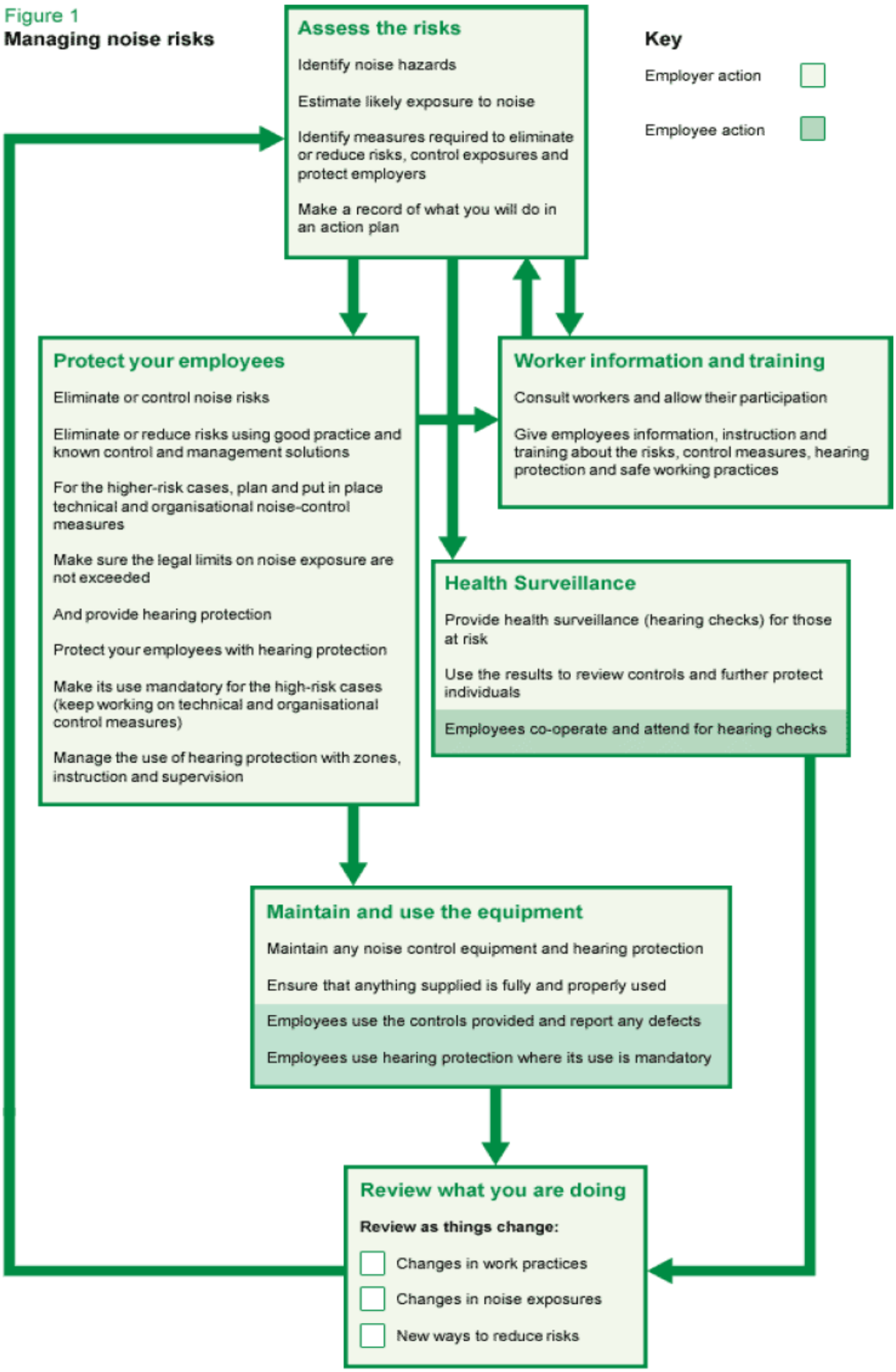

Fig 1b Managing Noise Risk taken from HSE -