

EC SAFETY AND HEALTH LEGISLATION RELEVANT TO NOISE AT CONSTRUCTION SITES AND FOR WORKERS ON FIXED-DURATION AND TEMPORARY CONTRACTS

by

Bridget Hay, School of the Built Environment, Coventry University, Coventry, CV1 5FB

1. INTRODUCTION

Temporary or mobile construction sites constitute an area of activity that exposes workers to particularly high levels of risk. In the Community as a whole, 7% of employees work in the construction industry. But it accounts for 15% of accidents, and 30% of fatal accidents at work. Accordingly, compliance with certain minimum requirements, designed to guarantee a better standard of safety and health for all employees of the main contractor and sub-contractors, including self-employed persons, is essential. Workers must be told about risks to their hearing which they face on a construction site.

2. STRATEGIC PLAN

A common position was reached by the European Council of Ministers on 19 December 1991, on the proposed directive on minimum safety and health requirements at temporary or mobile construction sites ⁽¹⁾. The strategy of the proposed directive ⁽¹⁾ is to divide building and civil engineering works into two stages. These are the 'project preparation' and the 'project execution' stages. Then the duty of the 'project supervisor' (who would normally be the Architect) is to take account of the general principles of prevention concerning safety and health set out in the framework directive ⁽²⁾. He shall do this when:-

- i. architectural, technical and/or organisational aspects are being decided, in order to plan the various stages of work, which are to occur simultaneously or in succession;
- ii. estimating the period required for completing these work stages.

A new duty is imposed on a building client to appoint safety and health co-ordinators, for both the project preparation and the project execution stage. This applies to any construction site, on which more than one contractor is present.

Secondly a new duty is imposed on the client to ensure that a safety and health plan is drawn up prior to the setting up of a construction site. This must set out the specific

EC SAFETY AND HEALTH LEGISLATION

rules applicable to that site. Where work will last for more than 30 working days, and where more than 20 workers will be working at one time, a 'prior notice' must be sent by the client to the competent authorities. This must state the type of project, the names of the S & H Co-ordinators, the start and completion dates, the maximum number of workers, planned number of contractors and self-employed persons, and details of contractors already chosen.

3. TACTICAL LEVEL

The SHC at the project execution stage is responsible for organising co-operation in matters of safety and health, where several sub-contractors share a site. He shall make arrangements to check that the working procedures are being implemented correctly, according to the S & H plan. He is responsible for choosing the location of workstations, so he will have an influence of the personal noise exposure of both operators of noisy equipment and bystanders. He is also responsible for technical maintenance of equipment to correct any faults affecting the health of workers.

4. OPERATIONAL LEVEL

The SHC shall ensure that the following directives are applied:-

4.1. Use of Work Equipment

This directive ⁽³⁾ lays down minimum safety and health requirements for any machine, apparatus, tool or installation used at work. One of the practical effects is that where an EC directive has already been adopted for a specific type of equipment, then only equipment which complies with that directive may be used when the site starts up after 31 December 1992. Thus all construction machines and tools must have instructions which comply with the Machinery Directive ⁽⁴⁾ as amended, and give:-

- i. the sound power level L_{WA} emitted by the machine and tool (where L_{pAeq} exceeds 85 dBA at workstations);
- ii. the equivalent continuous sound pressure level at workstations (where L_{pAeq} exceeds 70 dBA at workstations);
- iii. the peak unweighted instantaneous sound pressure at workstations (where this exceeds 63 Pascals).

In earlier years, specific types of construction plant and equipment were the subject of individual EC directives, which limited their permissible sound power levels. However,

EC SAFETY AND HEALTH LEGISLATION

the noise of any tool or interaction between the tool and the work piece is excluded. Furthermore, no provision was made for measuring at the workstation in most of them. The directives dealt with compressors, concrete breakers, earth moving equipment, power and welding generators and tower cranes.

4.2. Hearing Protection Directive

Article 7 of this directive ⁽⁶⁾ lays down that where it is not reasonably practicable to reduce the daily personal noise exposure L_{EPN} of a worker to below 85 dBA, the worker shall be able to have his hearing checked by a doctor (or on the responsibility of the doctor) and, if judged necessary by the doctor, by a specialist. Pure tone air-conduction audiometry is the preferred method. Following this test, the doctor should indicate any individual protective or preventive measures to be taken.

Article 4 states that where L_{EPN} is likely to exceed 85 dBA, or the peak unweighted instantaneous sound pressure exceeds 200 Pascals, adequate information and training must be provided on the potential risk to individual worker's hearing, and the wearing of personal ear protectors and the role of hearing checks. Article 3 requires measurements to be made and records kept in order to identify which workers are exposed at above 85 dBA, and above 90 dBA.

The reasons for the excess level shall be identified and the employer shall apply a programme of a technical nature and/or of organisation of work in order to reduce (as far as reasonably practicable) the exposure of the specific workers to noise. Personal ear protectors must be used at exposure levels exceeding 90 dBA (or 200 Pa instantaneous), and warning notices limiting access to areas of the site must be put up.

4.3. Personal Protective Equipment Directive

Where a worker needs to wear simultaneously more than one item of protective equipment ⁽⁶⁾, they must be both compatible and continue to be effective. Thus a worker assisting on piling would have to wear safety shoes, a helmet and ear protectors. While a worker doing demolition work would in addition need goggles and a face mask. These items must comply with the provisions of the product directive ⁽⁷⁾ on design and manufacture, with respect to safety and health.

5. FIXED-DURATION AND TEMPORARY WORKERS

Workers who have either a fixed-duration employment relationship or a temporary employment relationship must be told about risks to their hearing which they face on a construction site, by virtue of a new directive ⁽⁸⁾. The implementation date of this

EC SAFETY AND HEALTH LEGISLATION

directive by Member States is by 31 December 1992. Such information must cover any special occupational qualifications or skills or special medical surveillance required (as defined in national legislation) and state clearly any increased specific risks (as defined in national legislation), that the job may entail.

6. WORKING TIME DRAFT DIRECTIVE

As part of its Social Charter, the European Commission wants a single directive ⁽⁹⁾ to set rules for 'working time'. This covers issues such as maximum hours of work, rest periods, holidays, shift patterns and night work. There is a proposed 48-hour maximum working week. Thus it could affect the weekly average of the daily values of personal noise exposure ⁽⁹⁾ of a worker $L_{EP, w}$.

7. SUMMARY

Self-employed persons may through their activities jeopardise the safety and health of other workers in relation to protection of their hearing. To guard against this, implementation of the EC Directive by 31 December 1993 will be at three levels: strategic, tactical and operational. The innovative strategy of the proposed directive ⁽⁹⁾ requires the appointment of two safety and health co-ordinators, at the project design and execution stages. A prior notice shall be given to the authorities in their territory, stating the type of works and maximum number of workers on the site. Thus, at the tactical level, the safety and health co-ordinator, (SHC) will be able to achieve better co-ordination in the implementation of the framework directive ⁽⁹⁾, where various undertakings work simultaneously, or in succession at the same construction site. At the operational level, the SHC will have the following tools to hand. These are firstly, the use of work equipment directive ⁽⁹⁾; secondly, the machinery safety directive ⁽⁹⁾; thirdly, the workers' hearing protection directive ⁽⁹⁾; and fourthly, the personal protective equipment directive ⁽⁹⁾. Before temporary workers start work, they must be told about risks to their hearing to which they may be exposed by virtue of a new directive ⁽⁹⁾. Furthermore, a proposed directive ⁽⁹⁾ on working time would impose minimum daily and weekly rest periods.

8. REFERENCES

1. Amended proposal for a council directive COM(91) 117 (Final) - SYN 279 (1991) on the implementation of minimum safety and health requirements at temporary or mobile construction sites. Official Journal of the European Communities (OJ) No. C112, 27.4.91, p4.

EC SAFETY AND HEALTH LEGISLATION

2. Council directive 89/391/EEC (1989) on the introduction of measures to encourage improvements in the safety and health of workers at work.
OJ No. L183, 29.6.89, p1.
3. Council directive 89/655/EEC (1989) concerning the minimum safety and health requirements for the use of work equipment by workers at work.
OJ No. L393, 30.12.89, p13.
4. Council directive 89/392/EEC (1989) on the approximation of the Laws of the Member States relating to machinery.
OJ No. L183, 29.6.89, p25.
Amending directive 91/368/EEC (1991)
OJ No. L198, 22.7.91, p16
5. Council directive 89/656/EEC (1986) on the protection of workers from the risks related to exposure to noise at work.
OJ No. L137, 24.5.86, p28.
6. Council directive 89/656/EEC (1989) on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace.
OJ No. L393, 30.12.89, p18.
7. Council directive 89/686/EEC (1989) on the approximation of the Laws of the Members States relating to personal protective equipment.
OJ No. L399, 30.12.89, p18.
8. Council directive 91/383/EEC (1991) supplementing the measures to encourage improvements in the safety and health of workers with a fixed duration employment relationship or a temporary employment relationship.
OJ No. L206, 29.7.91, p19.
9. Proposal for a council directive COM (90) 317 final - SYN 295 concerning certain aspects of the organisation of working time.
OJ No. C254, p4.

