

ANNEX IV

MINIMUM SAFETY AND HEALTH REQUIREMENTS FOR CONSTRUCTION SITES

Referred to in Article 9 (a) and Article 10 (1) (a) (i) of the Directive

Preliminary remarks

The obligations laid down in this Annex apply wherever required by the features of the construction site, the activity, the circumstances or a hazard.

For the purposes of this Annex, 'rooms' covers, *inter alia*, hutted accommodation.

PART A

GENERAL MINIMUM REQUIREMENTS FOR ON-SITE WORKPLACES

1. Stability and solidity
 - 1.1. Materials, equipment and, more generally, any component which, when moving in any way, may affect the safety and health of workers must be stabilized in an appropriate and safe manner.
 - 1.2. Access to any surface involving insufficiently resistant materials is not authorized unless appropriate equipment or means are provided to enable the work to be carried out safely.
2. Energy distribution installations
 - 2.1. The installations must be designed, constructed and used so as not to present a fire or explosion hazard; persons must be adequately protected against the risk of electrocution caused by direct or indirect contact.
 - 2.2. The design, construction and choice of equipment and protection devices must take account of the type and power of the energy distributed, external conditions and the competence of persons with access to parts of the installation.
3. Emergency routes and exits
 - 3.1. Emergency routes and exits must remain clear and lead as directly as possible to a safe area.
 - 3.2. In the event of danger, it must be possible for workers to evacuate all workstations quickly and as safely as possible.
 - 3.3. The number, distribution and dimensions of emergency routes and exits depend on the use, equipment and dimensions of the site and of the rooms and the maximum number of persons that may be present.
 - 3.4. Specific emergency routes and exits must be indicated by signs in accordance with the national regulations implementing Directive 77/576/EEC⁽¹⁾.

Such signs must be sufficiently resistant and be placed at appropriate points.

- 3.5. Emergency routes and exits, and the traffic routes and doors giving access to them, must be free from obstruction so that they can be used at any time without hindrance.
- 3.6. Emergency routes and exits requiring illumination must be provided with emergency lighting of adequate intensity in case the lighting fails.

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4. Fire detection and fire fighting

- 4.1. Depending of the characteristics of the site, the dimensions and use of the rooms, the on-site equipment, the physical and chemical properties of the substances present and the maximum potential number of people present, an adequate number of appropriate fire-fighting devices and, where required, fire detectors and alarm systems must be provided.
- 4.2. These fire-fighting devices, fire detectors and alarm systems must be regularly checked and maintained.

Appropriate tests and drills must take place at regular intervals.

- 4.3. Non-automatic fire-fighting equipment be easily accessible and simple to use.

The equipment must be indicated by signs in accordance with the national regulations implementing Directive 77/576/EEC.

Such signs must be sufficiently resistant and placed at appropriate points.

5. Ventilation

Steps shall be taken to ensure that there is sufficient fresh air, having regard to the working methods used and the physical demands placed on the workers.

If a forced ventilation system is used, it must be maintained in working order and must not expose workers to draughts which are harmful to health.

Any breakdown must be indicated by a control system where this is necessary for workers' health.

6. Exposure to particular risks

- 6.1. Workers must not be exposed to harmful levels of noise or to harmful external influences (e.g. gases, vapours, dust).
- 6.2. If workers have to enter an area where the atmosphere is liable to contain a toxic or harmful substance or to have an insufficient oxygen level or to be inflammable, the confined atmosphere must be monitored and appropriate steps taken to prevent any hazards.
- 6.3. A worker may not in any circumstances be exposed to a high-risk confined atmosphere.

He must at least be watched at all times from outside and all appropriate precautions must be taken to ensure that he can be assisted effectively and immediately.

7. Temperature

During working hours, the temperature must be appropriate for human beings, having regard to the working methods used and the physical demands placed on the workers.

8. Natural and artificial lighting of workstations, rooms and traffic routes on the site

- 8.1. Workstations, rooms and traffic routes must as far as possible have sufficient natural lighting and be provided with appropriate and sufficient artificial lighting at night and when natural daylight is inadequate; where necessary, portable light sources that are protected against impact must be used.

The colour of artificial light used must not alter or affect the perception of signals or signposts.

- 8.2. Lighting installations for rooms, workstations and traffic routes must be placed in such a way that there is no risk of accident to workers as a result of the type of lighting fitted.
- 8.3. Rooms, workstations and traffic routes where workers are especially exposed to risks [^{X1}in the event of failure of artificial lighting] must be provided with emergency lighting of adequate intensity.

Editorial Information

X1 Substituted by [Corrigendum to Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum safety and health requirements at temporary or mobile construction sites \(eighth individual Directive within the meaning of Article 16 \(1\) of Directive 89/391/EEC\) \(Official Journal of the European Communities No L 245 of 26 August 1992\)](#).

9. Doors and gates
 - 9.1. Sliding doors must be fitted with a safety device to prevent them from being derailed and falling over.
 - 9.2. Doors and gates opening upwards must be fitted with a mechanism to secure them against falling back.
 - 9.3. Doors and gates along escape routes must be appropriately marked.
 - 9.4. In the immediate vicinity of gates intended primarily for vehicle traffic, there must be doors for pedestrian traffic unless it is safe for pedestrians to cross; such doors must be clearly marked and kept free at all times.
 - 9.5. Mechanical doors and gates must operate without any risk of accident to workers.

They must be fitted with emergency stop devices which are easily identifiable and accessible and, unless they open automatically in the event of a power-cut, it must be possible for them to be opened manually.

10. Traffic routes — danger areas
 - 10.1. Traffic routes, including stairs, fixed ladders and loading bays and ramps, must be calculated, located, laid out and made negotiable to ensure easy, safe and appropriate access in such a way as not to endanger workers employed in the vicinity of these traffic routes.
 - 10.2. Routes used for pedestrian traffic and/or goods traffic including those used for loading and unloading must be dimensioned in accordance with the number of potential users and the type of activity concerned.

If means of transport are used on traffic routes, a sufficient safety clearance or adequate protective devices must be provided for other site users.

Routes must be clearly marked, regularly checked and properly maintained.

- 10.3. Sufficient clearance must be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.

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- 10.4. If the site includes limited-access areas, these must be equipped with devices to prevent unauthorized workers from entering.

Appropriate measures must be taken to protect workers who are authorized to enter the danger areas.

Danger areas must be clearly signposted.

11. Loading bays and ramps

- 11.1. Loading bays and ramps must be suitable for the dimensions of the loads to be transported.

- 11.2. Loading bays must have at least one exit point.

- 11.3. Loading ramps must be sufficiently safe to prevent workers from falling off.

12. Freedom of movement at the workstation

The floor area at the workstation must be such as to allow workers sufficient freedom of movement to perform their work, taking account of any necessary equipment or appliances present.

13. First aid

- 13.1. The employer must ensure that first aid can be provided, and that the staff trained to provide it can be called upon, at any time.

Measures must be taken to ensure that workers who have had an accident or have suddenly been taken ill can be removed for medical treatment.

- 13.2. One or more first-aid rooms must be provided where the scale of the works or the types of activity being carried out so require.

- 13.3. First-aid rooms must be fitted with essential first-aid installations and equipment and be easily accessible to stretchers.

They must be signposted in accordance with the national regulations implementing Directive 77/576/EEC.

- 13.4. In addition, first-aid equipment must be available at all places where working conditions so require.

This equipment must be suitably marked and easily accessible.

The address and telephone number of the local emergency service must be clearly displayed.

14. Sanitary equipment

- 14.1. Changing rooms and lockers.

- 14.1.1. Appropriate changing rooms must be provided for workers if they have to wear special work clothes and if, for reasons of health or propriety, they cannot be expected to change in another area.

Changing rooms must be easily accessible, be of sufficient capacity and be provided with seating.

- 14.1.2. Changing rooms must be sufficiently large and have facilities to enable each worker, where necessary, to dry his working clothes as well as his own clothing and personal effects and to lock them away.

If circumstances so require (e.g. [^{X1}dangerous substances], humidity, dirt), facilities must be provided to enable working clothes to be kept in a place separate from workers' own clothes and personal effects.

- 14.1.3. [^{X1}Provision must be made for separate changing rooms or separate use of changing rooms for men and women.

- 14.1.4. If changing rooms are not required as referred to in point 14.1.1, first paragraph, each worker must be provided with a place in which he can lock away his own clothes and personal effects.

14.2. Showers and washbasins

- 14.2.1. Suitable showers in sufficient numbers must be provided for workers if required by the nature of the work or for health reasons.

Provision must be made for separate shower rooms or separate use of shower rooms for men and women.

- 14.2.2. The shower rooms must be sufficiently large to permit each worker to wash without hindrance in conditions of an appropriate standard of hygiene.

The showers must be equipped with hot and cold running water.

- 14.2.3. Where showers are not required under the first paragraph of 14.2.1, a sufficient number of suitable washbasins with running water (hot water if necessary) must be provided in the vicinity of the workstations and the changing rooms.

Provision must be made for separate washbasins, or separate use of washbasins for men and women when so required for reasons of propriety.

- 14.2.4. Where the rooms housing, the showers or washbasins are separate from the changing rooms, there must be easy communication between the two.

14.3. Lavatories and washbasins

Special facilities with an adequate number of lavatories and washbasins must be provided for workers in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers or washbasins.

Provision must be made] for separate lavatories or separate use of lavatories for men and women.

15. Rest rooms and/or accommodation areas

- 15.1. Where the safety or health of workers, in particular because of the type of activity carried out or the presence of more than a certain number of employees as well as the remote nature of the site, so require, workers must be provided with easily accessible rest rooms and/or accommodation areas.

- 15.2. Rest rooms and/or accommodation areas must be large enough and equipped with an adequate number of tables and seats with backs for the number of workers concerned.

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15.3. If there are no facilities of this kind, other facilities must be provided in which workers can stay during interruptions in work.

15.4. Fixed accommodation areas unless used only in exceptional cases, must have sufficient sanitary equipment, a rest room and a leisure room.

They must be equipped with beds, cupboards, tables and seats with backs taking account of the number of workers, and be allocated taking account, where appropriate, of the presence of workers of both sexes.

15.5. Appropriate measures should be taken for the protection of non-smokers against discomfort caused by tobacco smoke in rest rooms and/or accommodation areas.

16. Pregnant women and nursing mothers

Pregnant women and nursing mothers must be able to lie down to rest in appropriate conditions.

17. Handicapped workers

Workplaces must be organized to take account of handicapped workers, if necessary.

The provision applies in particular to the doors, passageways, staircases, showers, washbasins, lavatories and workstations used or occupied directly by handicapped persons.

18. Miscellaneous provisions

18.1. The surroundings and the perimeter of the site must be signposted and laid out so as to be clearly visible and identifiable.

18.2. Workers must be provided at the site with a sufficient quantity of drinking water and possibly another suitable non-alcoholic beverage both in occupied rooms and in the vicinity of workstations.

18.3. Workers must:

- be provided with facilities enabling them to take their meals in satisfactory conditions,
- where appropriate, be provided with facilities enabling them to prepare their meals in satisfactory conditions.

PART B

SPECIFIC [X¹MINIMUM REQUIREMENTS FOR] ON-SITE WORKSTATIONS

Preliminary remark

If special situations so dictate, the classification of these minimum requirements into two sections, as below, should not be regarded as binding.

Section I

On-site indoor workstations

1. Stability and solidity

Premises must have a structure and stability appropriate to the nature of their use.

2. Emergency doors

Emergency doors must open outwards.

Emergency doors must not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.

Sliding or revolving doors are not permitted if intended as emergency exits.

3. Ventilation

If air-conditioning or mechanical ventilation installations are used, they must operate in such a way that workers are not exposed to draughts which cause discomfort.

Any deposit or dirt likely to create an immediate danger to the health of workers by polluting the atmosphere must be removed without delay.

4. Temperature

4.1. The temperature in rest areas, rooms for duty staff, sanitary facilities, canteens and first-aid rooms must be appropriate to the particular purpose of such areas.

4.2. Windows, skylights and glass partitions should allow excessive effects of sunlight to be avoided, having regard to the nature of the work and the use of the room.

5. Natural and artificial lighting

Workplaces must as far as possible have sufficient natural light and be equipped with the means of providing artificial lighting which is adequate for the purposes of protecting workers' safety and health.

6. Floors, walls, ceilings and roofs of rooms

6.1. The floors of workplaces must have no dangerous bumps, holes or slopes and must be fixed, stable and not slippery.

6.2. The surfaces of floors, walls and ceilings in rooms must be such that they can be cleaned or refurbished to an appropriate standard of hygiene.

6.3. Transparent or translucent walls, in particular all-glass partitions, in rooms or in the vicinity of workplaces and traffic routes must be clearly indicated and made of safety material or be shielded from such places or traffic routes to prevent workers from coming into contact with walls or being injured should the walls shatter.

7. Windows and skylights

7.1. It must be possible for workers to open, close, adjust or secure windows, skylights and ventilators in a safe manner.

When open, they must not be positioned so as to constitute a hazard to workers.

7.2. Windows and skylights must be designed in conjunction with equipment or otherwise fitted with devices allowing them to be cleaned without risk to the workers carrying out this work or to workers present.

8. Doors and Gates

8.1. The position, [X¹ number and dimensions] of doors and gates, and the materials used in their construction, are determined by the nature and use of the rooms or areas.

8.2. Transparent doors must be appropriately marked at a conspicuous level.

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- 8.3. Swing doors and gates must be transparent or have see-through panels.
- 8.4. If transparent or translucent surfaces in doors and gates are not made of safety material and if there is a danger that workers may be injured if a door or gate should shatter, the surfaces must be protected against breakage.

9. Traffic routes

Where the use and equipment of rooms so requires for the protection of workers, traffic routes must be clearly identified.

10. Specific measures for escalators and travelators

Escalators and travelators must function safely.

They must be equipped with any necessary safety devices.

They must be fitted with easily identifiable and accessible emergency shut-down devices.

11. Room dimensions and air space in rooms

Workrooms must have sufficient surface area and height to allow workers to perform their work without risk to their safety, health or well-being.

Section II

On-site outdoor workstations

1. Stability and solidity

1.1. High-level or low-level movable or fixed workstations must be solid and stable, taking account of:

- the number of workers occupying them,
- the maximum loads they may have to bear and the weight distribution,
- the outside influences to which they may be subject.

If the support and the other components of these workstations are not intrinsically stable, their stability will have to be ensured by appropriate and safe methods of fixing to avoid any untimely or spontaneous movement of the whole or of parts of the workstations.

1.2. Checking

Stability and solidity must be checked appropriately and especially after any change [^{X1}in the height or depth] of the workstation.

2. Energy distribution installations

2.1. On-site energy distribution installations, especially those subject to outside influences, must be regularly checked and maintained.

2.2. Installations existing before the site began must be identified, checked and clearly signposted.

2.3. Whenever possible, where overhead electric power lines exist, either they must be redirected away from the area of the site or else the current must be cut off.

If this is not possible, there will be barriers or notices to ensure that vehicles and installations are kept away.

Suitable warnings and suspended protections must be provided where vehicles have to pass beneath the lines.

3. Atmospheric influences

Workers must be protected against atmospheric influences which could affect their health and safety.

4. Falling objects

Wherever technically feasible, workers must be protected by collective methods against falling objects.

Materials and equipment must be laid out or stracked in such a way as to prevent their collapsing or overturning.

Where necessary, there must be covered passageways [^{X1}on the site or access] to danger areas must be made impossible.

5. Falls from a height

5.1. Falls from a height must be physically prevented in particular by means of solid cradles which are sufficiently high and have at least an end-board, a main handrail and an intermediate handrail or an equivalent alternative.

5.2. In principle, work at a height must be carried out only with appropriate equipment or using collective protection devices such as cradles, platforms or safety nets.

If the use of such equipment is not possible because of the nature of the work, suitable means of access must be provided and safety harnesses or other anchoring safety methods must be used.

6. Scaffolding and ladders⁽²⁾

6.1. All scaffolding must be properly designed, constructed and maintained to ensure that it does not collapse or move accidentally.

6.2. Work platforms, gangways and scaffolding stairways must be constructed, dimensioned, protected and used in such a way as to prevent people from falling or being exposed to falling objects.

6.3. Scaffolding must be inspected by a competent person:

(a) before being put into service;

(b) subsequently, at periodic intervals;

(c) after any [^{X1}modification, period] without use, exposure to bad weather or seismic tremors, or any other circumstance which may have affected its strength or stability.

6.4. Ladders must be sufficiently strong and correctly maintained.

They must be correctly used, in appropriate places and in accordance with their intended purpose.

6.5. Mobile scaffolding must be secured against spontaneous movements.

7. Lifting equipment⁽²⁾

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- 7.1. All lifting devices and accessories, including their component parts, attachments, anchorings and supports, must be:
 - (a) properly designed and constructed and sufficiently strong for the use to which they are put;
 - (b) correctly installed and used;
 - (c) maintained in good working order;
 - (d) checked and subjected to periodic tests and inspections in accordance with current legislation;
 - (e) operated by qualified workers who have received appropriate training.
- 7.2. All lifting devices [^{X1}and accessories must] clearly display their maximum load values.
- 7.3. Lifting equipment and accessories may not be used for other than their intended purposes.
8. Excavating and materials-handling vehicles and machinery⁽²⁾
 - 8.1. All excavating and materials-handling vehicles and machinery must be:
 - (a) properly designed and constructed taking account, as far as possible, of the principles of ergonomics;
 - (b) kept in good working order;
 - (c) used correctly.
 - 8.2. Drivers and operators of excavating and materials-handling vehicles and machinery must be specially trained.
 - 8.3. Preventive measures must be taken to ensure that excavating and materials-handling vehicles and machinery do not fall into the excavations or into water.
 - 8.4. Where appropriate, excavating machinery and materials-handling machinery must be fitted with structures to protect the driver against being crushed if the machine overturns, and against falling objects.
9. Installations, machinery, equipment⁽²⁾
 - 9.1. Installations, machinery and equipment, including hand tools whether power-driven or not, must be:
 - (a) properly designed and constructed [^{X1}taking account, as far as] possible, of the principle of ergonomics;
 - (b) kept in good working order;
 - (c) used solely for the work for which they were designed;
 - (d) operated by workers who have received appropriate training.
 - 9.2. Installations and equipment under pressure must be checked and subjected to regular tests and inspections in accordance with existing legislation.
10. Excavations, wells, underground works, tunnels and earthworks

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- 10.1. Suitable precautions must be taken in an excavation, well, underground, working or tunnel:
 - (a) using an appropriate support or embankment;
 - (b) to prevent hazards entailed in the fall of a person, materials or objects, or flooding;
 - (c) to provide sufficient ventilation at all workstations so as to ensure a breathable atmosphere which is not dangerous or harmful to health;
 - (d) to enable workers to reach safety in the event of fire or [^{X1}inrush of water] or materials.
- 10.2. Before excavation starts, measures must be taken to identify and reduce to a minimum any hazard due to underground cables and other distribution systems.
- 10.3. Safe routes into and out of the excavation must be provided.
- 10.4. Piles of earth, materials and moving vehicles must be kept away from the excavation; appropriate barriers must be built if necessary.
11. Demolition work

Where the demolition of a building or construction may present a danger:

- (a) appropriate precautions, methods and procedures must be adopted;
- (b) the work must be planned and undertaken only under the supervision of a competent person.
12. Metal or concrete frameworks, shutterings and heavy prefabricated components
 - 12.1. Metal or concrete frameworks and their components, shutterings, prefabricated components or [^{X1}temporary supports, and] buttresses must be erected and dismantled only under the supervision of a competent person.
 - 12.2. Adequate precautions must be taken to protect workers against risks arising from the temporary fragility or instability of a structure.
 - 12.3. Shutterings, temporary supports and buttresses [^{X1}must be devised and designed], installed and maintained so as to safely withstand any strains and stresses which may be placed on them.
13. Cofferdams and caissons
 - 13.1. All cofferdams and caissons must be:
 - (a) well constructed, of appropriate, solid materials of adequate strength;
 - (b) appropriately equipped so that workers can gain shelter in the event of an irruption of water and materials.
 - 13.2. The construction, installation, transformation or dismantling of a cofferdam or caisson must take place only under the supervision of a competent person.
 - 13.3. All cofferdams and caissons must be inspected by a competent person at regular intervals.
14. Work on roofs

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- 14.1. Where necessary to avert a risk or where the height or the slope exceed values set by the Member States, collective preventive measures must be taken to prevent workers, and tools or other objects or materials, from falling.
- 14.2. Where workers have to work on or near a roof or any other surface made of fragile materials through which it is possible to fall, preventive measures must be taken to ensure that they do not inadvertently walk on the surface made of fragile materials, or fall to the ground.

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- (1) [OJ No L 229, 7.9.1977, p. 12](#). Last amended by Directive 79/640/EEC ([OJ No L 183, 19.7.1979, p. 1](#)).
- (2) This point will be specified in the framework of the future Directive amending Directive 89/655/EEC, particularly with a view to supplementing point 3 of the Annex thereto.