
Implementation of EC Directive 89/391 MERCHANT SHIPPING AND FISHING VESSELS (HEALTH AND SAFETY AT WORK) REGULATIONS 1997

Notice to Shipowners, Ship Operators and Managers, Masters, Officers and Ratings of Merchant Vessels, and Skippers and Crew on Fishing Vessels.

This Notice supersedes Notice 1398

Summary

This Marine Guidance Note announces new regulations governing occupational health and safety on board merchant and fishing vessels, and gives guidance on the application of the Regulations.

Key points:

The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations come into force on 31 March 1998.

They supersede the Merchant Shipping (Health and Safety: General Duties) Regulations 1984 and the Merchant Shipping (Safety Officials and Reporting of Accidents and Dangerous Occurrences) Regulations 1982.

The main new requirements for employers under the regulations are risk assessment and health surveillance - the annexes to this Marine Guidance Note contain advice on those two duties.

1. The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 (S.I. 1997/2962) will come into force on 31 March 1998. They implement Council Directive 89/391/EC on the introduction of measures to encourage improvements in safety and health of workers at work (the "Framework Directive"). The Regulations apply to United Kingdom ships and to other ships when they are in United Kingdom waters, except where the Management of Health and Safety at Work Regulations 1992 apply. The Code of Safe Working Practices for Merchant Seamen is currently being revised to reflect the new regulations and the new edition will be published by the Stationery Office later this year.
2. Copies of the Regulations are available from The Stationery Office Publications Centre, PO Box 276, London, SW8 5DT. Tel (orders) 0171 873 9090; (enquiries) 0171 873 0011. Fax (orders) 0171 873 8200. Copies may also be ordered through the Stationery Office's

bookshops, its accredited agents (see Yellow Pages) or from any good bookseller.

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Introduction

1. The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 replace the Merchant Shipping (Health and Safety: General Duties) Regulations. They have a wider scope than the regulations that they replace, in that they place duties on all “employers” and “workers” on board ships, and there are no exemptions for types of ship. “Employers” and “workers” are defined as follows:

“employer” means a person by whom a worker is employed under a contract of employment;

“worker” means any person employed by an employer under a contract of employment, including trainees or apprentices;

“contract of employment” means a contract of employment, whether express or implied, and if express, whether oral or in writing.

Those attending training courses on sail training vessels are excluded from the scope of the Regulations.

2. Under the Regulations, it is the duty of employers to protect the health and safety of workers and others affected by their activities so far as is reasonably practicable. The principles for ensuring health and safety are:
 - (a) *the avoidance of risks, which among other things includes the combating of risks at source and the replacement of dangerous practices, substances or equipment by non-dangerous or less dangerous practices, substances or equipment;*
 - (b) *the evaluation of unavoidable risks and the taking of action to reduce them;*
 - (c) *adoption of work patterns and procedures which take account of the capacity of the individual, especially in respect of the design of the workplace and the choice of work equipment, with a view in particular to alleviating monotonous work and to reducing any consequent adverse effect on workers’ health and safety;*

(d) *adaptation of procedures to take account of new technology and other changes in working practices, equipment, the working environment and any other factors which may affect health and safety;*

(e) *adoption of a coherent approach to management of the vessel or undertaking, taking account of health and safety at every level of the organisation;*

(f) *giving collective protective measures priority over individual protective measures; and*

(g) *the provision of appropriate and relevant information and instruction for workers.*

Duty holders under the Health and Safety at Work Regulations

3. It is important that those on whom duties are placed are in a position to carry them out. Employment relationships on board ship can be complex - for example the master may not be employed by the owner or operator of the ship, or by the same employer as the crew. There may also be people working on board such as contractors and sub-contractors, stevedoring companies and those under franchising arrangements (eg in retail or service outlets) whose employer has no direct responsibility for the safety of the ship. There is therefore no single “person” on whom it is appropriate to place the entire “employment” responsibility for health and safety on board.
4. The regulations therefore recognise two levels of “employment” responsibility. The regulations use the terms “Company” and “employer”. The “Company” may have duties as an “employer”.

“Company” means the owner of a ship or any other organisation or person such as the manager, or bareboat charterer, who has assumed the responsibility for operation of the ship from the owner;

5. Many aspects of the safety of the ship as a workplace (eg the structural soundness of the vessel, the provision of adequate lighting and ventilation, provision of life-saving appliances, and fire-fighting equipment) are under the control of the Company, either directly, or through contractual arrangements with the owner.

6. Each employer, which may include franchise companies operating catering facilities or retail outlets, has control over the occupational health and safety training of the staff employed, and over everyday working practices.
7. The duties for each are explained below.

Duties of employers

8. All employers have a duty to ensure so far as is reasonably practicable the health and safety of workers and others affected by their activities in accordance with the principles set out in paragraph 2 above. The basis of all safety measures should be an assessment by the employer of any risks to workers' health and safety from their work activities.
9. The measures taken must not involve cost to workers and are required to include the provision of:
 - safe working places and environment;
 - safe plant, machinery and equipment;
 - health and safety training, instruction, supervision and information;
 - any necessary protective clothing and equipment where risks cannot be removed by other means;
 - a health and safety policy;
 - information for workers about the findings of their risk assessment;
 - health surveillance of workers as appropriate;
 - information on the special occupational qualifications required to any employment business supplying them with temporary workers;
 - information about their activities and staff to the Company;
 - consultation with their workers or elected representatives on health and safety matters.

Competent person; "protective and preventive services"

10. The employer must appoint a competent person to take responsibility for health and safety, who will advise the employer on compliance with the regulations. If there is no-one competent among existing workers, a competent person may be employed from outside the company, or the employer may "appoint" himself.

New and expectant mothers

11. A new duty introduced by these regulations is that of assessing whether their duties or hours of work could place in jeopardy the health of new or expectant mothers or that of their unborn child (or if they are breastfeeding, their baby) . If so, their hours or conditions of work should be changed or alternative work found, or, if that is not possible, they should be suspended, subject to their statutory rights.

Duties of the Company

12. In so far as the Company is an employer on board ship, it has a duty to assess the risks to workers and others affected by its activities. The Company's activity is the operation of the ship, and so it is responsible for co-ordinating the control measures identified in the risk assessments of all other relevant employers on board, as appropriate.
13. "**The Company**", in addition to its duties as an employer, is required to:
 - consult other employers on board about the health and safety of workers;
 - co-ordinate health and safety measures between all the employers on board;
 - provide information to workers about the ship safety systems;
 - appoint a safety officer (see paragraphs 14 and 15 below);
 - organise the election of safety representatives and safety committee (see paragraphs 14 and 15 below).

Safety Officials/Consultation with workers:

14. These Regulations also supersede the Safety Officials and Reporting of Dangerous Occurrences Regulations 1982. Regulations 15 to 17 deal with the appointment of safety officers, the election of safety representatives and safety committees.
15. These regulations apply, as before, to merchant vessels on which more than 5 workers are employed. The regulations are supported by guidance in the Code of Safe Working Practices for Merchant Seamen.
16. In addition, there is provision for consultation with workers where the election of safety representatives does not apply (ie fishing vessels, and merchant vessels on which less than 5 workers are employed). No rules are laid down for consultation in these circumstances, as this will best be decided in the light of the operating patterns and crewing arrangements on the vessel. In many cases, informal discussion will be the most practicable solution.

Duties of Workers

17. **Workers** are required to:
 - take reasonable care for their own health and safety and that of others on board who may be affected by their acts or omissions;
 - co-operate with anyone else carrying out health and safety duties - including compliance with control measures identified during the employer's or Company's evaluation of risk;
 - report any identified serious hazards or deficiencies immediately to the appropriate officer or other authorised person;
 - make proper use of plant and machinery, and treat any hazard to health or safety (such as a dangerous substance) with due caution.
18. Under the Regulations, it is also an offence for **any** person intentionally or recklessly to interfere with or misuse any thing provided in the interests of health and safety.

RISK ASSESSMENT

1 Introduction

1.1 Under the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997, employers are required to ensure the health and safety of workers and other persons so far as is reasonably practicable, by the application of certain principles. These principles include the avoidance of risks, and the evaluation of unavoidable risks and the taking of action to reduce them.

1.2 Specifically, employers are required to make a suitable and sufficient assessment of the risks to health and safety of workers arising in the normal course of their activities or duties, for the purpose of identifying:

- (a) groups of workers at particular risk in the performance of their duties; and
- (b) the measures to be taken to comply with the employer's duties under the Regulations;

The assessment should extend to others on board ship who may be affected by the acts or omissions of the employer.

1.3 Every employer and every self-employed person on board ship is required to inform the Company of any relevant risks to health and safety arising from the conduct of their business.

1.4 Employers must ensure that measures are taken to ensure an improvement in the safety and health of workers and other persons in respect of those risks identified by the assessment.

1.5 Employers must review the assessment when there is reason to believe that it is no longer valid, and make any necessary changes.

1.6 Workers must be informed of any significant findings of the assessment and measures for their protection, and of any subsequent revisions made.

1.7 The Company is also required to ensure that anyone working on the ship, whether or not they are directly employed by the Company, is aware of the findings of the Company's risk assessment and of the measures taken for their protection.

1.8 This guidance note explains the principles of risk assessment in relation to occupational health and safety and provides some advice on how the assessment and control of risks may be approached.

1.9 Regulation of occupational health and safety on board ship is of course not new. Existing safety measures may already provide a high level of safety for workers. For example, well-established procedures, inspections by safety officers and the use of "permits to work" which control safety conditions, will contribute to the identification of hazards and measures for safe working.

1.10 However, what is new is the explicit requirement in regulation for employers to adopt the risk assessment approach to occupational health and safety. This means that all work activities should be considered from a risk assessment standpoint.

1.11 Employers may adapt existing safety management systems to meet the risk assessment principles set out in section 3 and the main elements described in section 10, taking into account the nature of their operations and the type and extent of the hazards and risks to workers.

2 Key terms

2.1 Key terms, used frequently in this chapter, are defined below.

- a) A hazard is a source of potential harm or damage or a situation with potential for harm or damage;
- b) risk has two elements:
 - the likelihood that a hazard may occur;
 - the consequences of the hazardous event.

3 Principles of risk assessment

- 3.1 A "risk assessment" is intended to be a careful examination of what, in the nature of operations, could cause harm, so that decisions can be made as to whether enough precautions have been taken or whether more should be done to prevent harm. The aim is to minimise accidents and ill health on board ship.
- 3.2 The assessment should first identify the hazards that are present and then establish whether a hazard is significant and whether it is already covered by satisfactory precautions to control the risk, such as permits to work, restricted access, use of warning signs or personal protective equipment, including consideration of the likelihood of the failure of those precautions which are in place.
- 3.3 Any risk assessment must address risks to the health and safety of workers.

4 Risk assessment in practice

- 4.1 There are no fixed rules about how risk assessment should be undertaken, although section 10 gives the main elements. The assessment will depend on the type of ship, the nature of operations and the type and extent of the hazards and risks. The intention is that the process should be simple, but meaningful. The following sections give advice on good practice.

5 What should be assessed?

- 5.1 The assessment should cover all risks arising from the work activities of workers on the ship. The assessment is not expected to cover risks which are not reasonably foreseeable.
- 5.2 Employers are advised to record the significant findings of their risk assessment. Risks which are found to be trivial, and where no further precautions are required, need not be recorded.

6 Who has to carry out the assessment?

- 6.1 In all cases, individual employers have responsibility for assessing the risks to their workers and other persons who may be affected by their activities. The Company will be responsible for co-ordinating the risk assessments covering everyone on the ship including workers directly employed by itself, taking account of the other employers' assessments.
- 6.2 The process of risk assessment should be carried out by suitably experienced personnel, using specialist advice if appropriate.

7 How thorough should the assessment be?

- 7.1 Regulation 7(1) requires that a suitable and sufficient assessment be made of the risks to the health and safety of workers arising in the normal course of their duties. This requirement to assess risk relates only to risks which arise directly from the work activity being undertaken and which have the potential to harm the person(s) actually undertaking that work, or who may be directly affected by that work. The requirement to assess risk does not extend to any consequential peril to the ship resulting from the particular work activity, nor to any external hazards which may imperil the ship, either of which may cause harm to those on board or to others. These aspects are covered by other regulations.
- 7.2 The assessment of risks must be 'suitable and sufficient'. The process need not be overcomplicated. This means that the amount of effort that is put into an assessment should depend on the degree of harm that may occur and whether risks are already controlled by satisfactory precautions or procedures to ensure that they are as low as reasonably practicable.

8 When to assess?

- 8.1 Risk assessment should be seen as a continuous process. In practice, the risks in the workplace should be assessed before work begins on any task for which no valid risk assessment exists. An assessment must be reviewed and updated as necessary, to ensure that it reflects any significant changes of equipment or procedure.

9 Risk assessment pro-forma

- 9.1 Employers may wish to use a simple pro-forma to record the findings of an assessment, covering, for example:
- a) work activity;
 - b) hazard(s);
 - c) controls in place;
 - d) personnel at risk;
 - e) likelihood of harm;
 - f) severity of harm;
 - g) risk levels (sometimes called "risk factor");
 - h) action to be taken following the assessment;
 - i) administrative details, e.g. name of assessor, date, etc.

10 Elements of risk assessment

- 10.1 The main elements of the risk assessment process are :
- a) classify work activities
 - b) identify hazards and personnel at risk
 - c) determine risk
 - d) decide if risk is tolerable
 - e) prepare action plan (if necessary)
 - f) review adequacy of action plan
- 10.2 Further guidance on how each element may be accomplished is in the Appendix, which is based on British Standard 8800.

GUIDANCE ON MAIN ELEMENTS OF RISK ASSESSMENT

1. Classify work activities

1.1 A useful preliminary to risk assessment is to identify separate work activities, to group them in a rational and manageable way, and to gather necessary information (or collate existing information) about them. Infrequent maintenance tasks, as well as day-to-day operations, should be included. Possible ways of classifying work activities include:

- a) department/location on board ship/on the dockside;
- b) stages of an operation or work routine;
- c) planned and unscheduled maintenance;
- d) defined tasks (e.g. loading/unloading cargo).

1.2 Information required for each work activity might include:

- a) tasks being carried out: their duration and frequency;
- b) location(s) where the work is carried out;
- c) who normally/occasionally carries out the tasks;
- d) others who may be affected by the work (e.g. contractors, passengers);
- e) training that personnel have received for the task.

2. Identify hazards

2.1 Asking these three questions should help to identify where there is a hazard:

- Is there a source of harm?
- Who (or what) could be harmed?
- How could harm occur?

Hazards that clearly possess negligible potential for harm should not be documented or given further consideration, provided that appropriate control measures remain in place.

2.2 To help with the process of identifying hazards it may be useful to categorise hazards in different ways, for example by topic, e.g.:

- a) mechanical
- b) electrical
- c) physical
- d) radiation
- e) substances
- f) fire and explosion.

2.3 A complementary approach may be to develop a prompt list such as:

During work activities could the following hazards exist?

- a) slips/falls on the level;
- b) falls of persons from a height;
- c) falls of tools, materials, etc, from a height;
- d) inadequate headroom;
- e) inadequate ventilation;
- f) hazards from plant and machinery associated with assembly, commissioning, operation, maintenance, modification, repair and dismantling;
- g) hazards from manual handling.

The above list is not exhaustive, and employers could develop their own 'prompt list' taking into account the particular circumstances.

3. Determine risk

3.1 The risk from the hazard may be determined by estimating:

- the potential severity of harm; and
- the likelihood that harm will occur.

These two components should be judged independently.

3.2 When seeking to establish potential **severity of harm**, the following should be considered:

- a) part(s) of the body likely to be affected;
- b) nature of the harm, ranging from slightly to extremely harmful:
 - i) slightly harmful, e.g.:
 - superficial injuries; minor cuts and bruises; eye irritation from dust;
 - nuisance and irritation (e.g. headaches); ill-health leading to temporary discomfort;
 - ii) harmful, e.g.:
 - lacerations; burns; concussion; serious sprains; minor fractures; musculo-skeletal disorders;
 - deafness; dermatitis; asthma; work related upper limb disorders; ill-health leading to permanent minor disability;
 - iii) extremely harmful, e.g.:
 - amputations; major fractures; poisonings; multiple injuries; fatal injuries;
 - occupational cancer; other severely life shortening diseases; acute fatal diseases.

3.3 In order to establish the **likelihood of harm** the adequacy of control measures already in place should be considered. Legal requirements and guidance in this Code and other safety publications are good guides to adequate control of specific hazards. The following issues should then typically be assessed:

- a) number of personnel exposed;
- b) frequency and duration of exposure to the hazard;
- c) effects of failure of power or water supply;
- d) effects of failure of plant and machinery components and safety devices;
- e) exposure to the elements;
- f) protection afforded by personal protective equipment and its limitations;
- g) possibility of unsafe acts by persons for example, who:
 - i) may not know what the hazards are;
 - ii) may not have the knowledge, physical capacity, or skills to do the work;
 - iii) underestimate risks to which they are exposed;
 - iv) underestimate the practicality and utility of safe working methods.

The likelihood of harm can be assessed as highly unlikely, unlikely or likely.

3.4 Any given hazard is more serious if it affects a greater number of people. But some of the more serious hazards may be associated with an occasional task carried out by just one person, for example maintenance of inaccessible parts of lifting equipment.

4. Decide if risk is tolerable

4.1 Table 1 below shows one simple method for estimating risk levels and deciding whether risks are tolerable. Risks are classified according to their estimated likelihood and potential severity of harm. However, employers may wish to develop other approaches according to the nature of their operations.

Table 1.

	Slightly harmful	Harmful	Extremely harmful
Highly unlikely	TRIVIAL RISK	TOLERABLE RISK	MODERATE RISK
Unlikely	TOLERABLE RISK	MODERATE RISK	SUBSTANTIAL RISK
Likely	MODERATE RISK	SUBSTANTIAL RISK	INTOLERABLE RISK

Note: Tolerable here means that the risk has been reduced to the lowest level that is reasonably practicable.

5. Prepare risk control action plan

5.1 Having determined the significant risks, the next step is to decide what action should be taken to improve safety, taking account of precautions and controls already in place.

5.2 Risk categories form the basis for deciding whether improved controls are required and the timescale for action. Table 2 suggests a possible simple approach. This shows that the effort made to control risk should reflect the seriousness of that risk.

Table 2.

	ACTION AND TIMESCALE
TRIVIAL	No action is required and no documentary records need be kept
TOLERABLE	No additional controls are required. Consideration may be given to a more cost effective solution or improvement that imposes no additional cost burden. Monitoring is required to ensure that the controls are maintained.
MODERATE	Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and limited. Risk reduction measures should be implemented within a defined time period. Where the moderate risk is associated with extremely harmful consequences, further assessment may be necessary to establish more precisely the likelihood of harm as a basis for determining the need for improved control measures.
SUBSTANTIAL	Work should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken
INTOLERABLE	Work should not be <i>started</i> or <i>continued</i> until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work has to remain prohibited.

Note: Tolerable here means that the risk has been reduced to the lowest level that is reasonably practicable.

- 5.3 The outcome of a risk assessment should be an inventory of actions, in priority order, to devise, maintain or improve controls.
- 5.4 Controls should be chosen taking into account the following, which are in order of effectiveness:
- a) if possible, eliminate hazards altogether, or combat risks at source e.g. use a safe substance instead of a dangerous one;
 - b) if elimination is not possible, try to reduce the risk e.g. where risk is of electrocution, by using a low voltage electrical appliance;
 - c) where possible adapt work to the individual, e.g. to take account of individual mental and physical capabilities;
 - d) take advantage of technical progress to improve controls;
 - e) give precedence to measures that protect everyone;
 - f) if necessary, use a combination of technical and procedural controls;
 - g) introduce or ensure the continuation of planned maintenance, for example, of machinery safeguards;
 - h) ensure emergency arrangements are in place;
 - i) adopt personal protective equipment only as a last resort, after all other control options have been considered.
- 5.5 In addition to emergency and evacuation plans, it may be necessary to provide emergency equipment relevant to the specific hazards.

6. Review adequacy of action plan

- 6.1 Any action plan should be reviewed before implementation, typically by asking;
- a) will the revised controls lead to tolerable risk levels?
 - b) are new hazards created?
 - c) what do people affected think about the need for, and practicality of, the revised preventive measures?
 - d) will the revised controls be used in practice, and not ignored in the face of, for example, pressures to get the job done?

HEALTH SURVEILLANCE

1. Duty of employers

1.1 Employers must provide workers with such health surveillance as is appropriate taking into account the risks to their health and safety which are identified by the assessment undertaken in accordance with the regulations.

2. Purpose of health surveillance

2.1 Health surveillance is a means of identifying early signs of ill health caused by occupational hazards so that action can be taken to protect individuals at an early stage from further harm. For example:

- where a worker's exposure to a hazardous substance is approaching the agreed limit, the worker should be removed from exposure before any harm is done;
- if symptoms of minor ailments (e.g. skin rash) are detected, action should be taken to prevent them becoming major health problems.

2.2 In addition, the results of health surveillance can provide a means of:

- (a) checking the effectiveness of health control measures;
- (b) providing feedback on the accuracy of health risk assessment;
- (c) identifying and protecting individuals at increased risk.

2.3 Health surveillance is not a substitute for measures to control risks to health and safety. Control measures should always be the first consideration to reduce risk. Nor is it the same as medical examinations which are intended to assess fitness for work (for example pre-employment, sickness resumption or periodic examinations). However, where relevant, health surveillance should be conducted, for example at pre-employment assessment, where a base-line reference can usefully be established.

3 Application

3.1 Health surveillance should be introduced where risk assessment (see Chapter 1) identifies that :

- (a) a particular work activity may cause ill health;
- (b) an identifiable disease or adverse health condition is related to the work;
- (c) recognised testing methods are available for early detection of an occupational disease or condition - e.g. audiometry, skin inspection where dermatitis is a hazard;
- (d) there is a reasonable likelihood that a disease or condition may occur in relation to particular working conditions;
- (e) surveillance is likely to further the protection of workers' health.

3.2 All workers should be subject to whatever health surveillance is appropriate for the work activities they are involved in. Examples of circumstances in which it may be useful include :

- exposure to hazardous substances;
- working with vibrating tools;
- exposure to high levels of noise;
- use of substances known to cause dermatitis (e.g. solvents); and
- exposure to certain dusts (e.g. asbestos);

4 What to do

- 4.1 Once it is decided that health surveillance is appropriate, it should be maintained whilst the worker remains exposed to the hazard(s) in question. A worker's health surveillance records should where possible be retained, even when the worker changes employment.
- 4.2 Health surveillance may involve one or more of the following, as applicable:
 - (a) inspection of readily detectable conditions (e.g. skin damage) by a person acting within the limits of their training and experience;
 - (b) enquiries about symptoms;
 - (c) hearing checks (audiometry);
 - (d) medical examinations or company health checks;
 - (e) testing blood or urine samples.
- 4.3 The frequency of such checks should be determined either on the basis of suitable general guidance (e.g. skin inspection for skin damage) or on the advice of a qualified occupational health practitioner. The workers concerned could be given an explanation of the purpose of health surveillance and an opportunity to comment on the proposed frequency of such health surveillance procedures, either directly or through their safety representatives.
- 4.4 Where medical surveillance is required, and it is necessary to take samples or record other personal information, it is essential that confidentiality is maintained in respect of individual health records containing clinical information.