



# Media diving projects

Diving at Work Regulations 1997



APPROVED CODE  
OF PRACTICE

L106

HSE BOOKS

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contains 41 pages

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### **The Approved Code of Practice**

This Approved Code of Practice has been approved by the Health and Safety Commission with the consent of the Secretary of State. It gives practical advice on how to comply with the law. If you follow the advice you will be doing enough to comply with the law in respect of those specific matters on which the Approved Code of Practice gives advice. You may use alternative methods to those set out in the Approved Code of Practice in order to comply with the law.

However, the Approved Code of Practice has a special legal status. If you are prosecuted for breach of health and safety law, and it is proved that you did not follow the relevant provisions of the Approved Code of Practice, you will need to show that you have complied with the law in some other way or a court will find you at fault.

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## Notice of Approval

By virtue of section 16(1) of the Health and Safety at Work etc Act 1974, and with the consent of the Secretary of State for Environment, Transport and the Regions, the Health and Safety Commission has on 10 December 1997 approved the Code of Practice entitled *Media diving projects*.

The Code of Practice is approved for the purposes of providing practical guidance with respect to the requirements of the Diving at Work Regulations 1997 (SI 1997 No 2776) and with respect to regulation 3 of the Management of Health and Safety at Work Regulations 1992 (SI 1992 No 2051). The Code of Practice comes into force on 1 April 1998.

Reference in this Code of Practice to another document does not imply approval by HSC of that document except to the extent necessary to give effect to this Code of Practice.

Signed

ROSEMARY BANNER  
*Secretary to the Health and Safety Commission*

19 January 1998

## **Preface**

This publication contains the Approved Code of Practice (ACOP) and additional guidance for media diving projects, together with the relevant regulations from the Diving at Work Regulations 1997. The full text of the Regulations (SI 1997 No 2776) is available from the Stationery Office.

For convenience, the full text of the Regulations is included in *italic* type, with the accompanying ACOP in **bold** type.

## Introduction and scope

## Explanation and intention of the Approved Code of Practice

1 This Approved Code of Practice (ACOP) (referred to as the Code) gives advice on meeting the requirements of the Diving at Work Regulations 1997 (referred to in this Code as the Diving Regulations) for media diving projects. In particular, the Code gives advice on how to comply with those Regulations that are set out in general terms.

2 It should not be assumed that compliance with the Diving Regulations means that all aspects of the law are being complied with. The requirements of other legislation may also need to be fulfilled.

### Health and safety legislation

3 The basis of health and safety law in Great Britain is the Health and Safety at Work etc Act 1974 (the HSW Act). The HSW Act sets out the general duties that employers and the self-employed have towards employees and members of the public, and the duties that employees have to themselves and to each other. Some of these duties are qualified in the HSW Act by the principle of *so far as is reasonably practicable*. This requires all reasonable precautions to be taken to remove the risk of harm.

4 Regulations are law, approved by Parliament. These are usually made under the HSW Act following proposals from the Health and Safety Commission (HSC). Regulations set out specific action that must be taken.

### Scope and areas covered by the Code

5 This Code applies to all media divers and media diving projects.

6 The term 'media diver' includes: stunt people, journalists, presenters, photographers, camera operators and sound and lighting technicians and the unit crew required to dive in support of underwater media work. For further information see section 'Divers'.

7 The term does not include divers used in the preparation of underwater locations that require engineering and construction skills or the handling or use of explosives. This would be covered by the Inshore Code.

8 The Code also applies to all media diving projects within the United Kingdom waters adjacent to Great Britain (generally 12 nautical miles from the low water line).

### Who wrote the Code and how it was agreed

9 A working party of media authors worked with the Health and Safety Executive (HSE) to produce the draft Code. A draft of this Code was published by HSC in July 1996 for public consultation.

### Updating arrangements

10 There will be regular meetings between HSE, the media authors and other parties in the industry to discuss the current suitability of the Code. When technology, industry standards or practices change, consideration will be given to amending the Code. All amendments will be the subject of formal public consultation.

### **The other diving Codes**

11 There are four other Codes covering diving at work:

- (a) Scientific and archaeological diving projects (ISBN 0 7176 1498 0);
- (b) Recreational diving projects (ISBN 0 7176 1496 4);
- (c) Commercial diving projects offshore (ISBN 0 7176 1494 8); and
- (d) Commercial diving projects inland/inshore (ISBN 0 7176 1495 6).

12 Each of these Codes has been drafted by HSE with the help of the industry associations for that sector and covers standards and practices that are relevant to its particular area of diving.

## Definitions in the Regulations

### Regulation 2

Regulation  
2(1)

(1) *“diver” means a person at work who dives;*

Guide

13 ‘At work’ means as an employee or as a self-employed person. The phrase covers divers who dive as part of their duties as an employee and divers who are in business on their own account during the time that they devote themselves to work as a self-employed diver. Diving does not have to be the main work activity of the employee or the self-employed person. For example, a media diver could be a journalist, camera operator, or stunt person. The Diving Regulations apply to any diving project where at least one diver is at work.

2(1)

Regulation

(2) *For the purposes of these Regulations a person “dives” if -*

(a) *he enters -*

(i) *water or any other liquid; or*

(ii) *a chamber in which he is subject to pressure greater than 100 millibars above atmospheric pressure; and*

(b) *in order to survive in such an environment he breathes in air or other gas at a pressure greater than atmospheric pressure.*

2(2)

Guide

14 Environments such as scientific clean rooms or submersible craft subject to an internal pressure of less than 100 millibars above local ambient atmospheric pressure are *not* covered by the Diving Regulations.

2(2)

Regulation

(1) *“diving project” means any activity, made up of one or more diving operations, in which at least one person takes part or will take part as a diver and extends from the time when that person, or the first such person, commences to prepare to dive until that person, or the last such person, has left the water, chamber or other environment in which the dive, or any part of the dive, took place and has completed any requisite decompression procedures, including, where it may be reasonably anticipated that this will be needed, any therapeutic recompression;*

2(1)

Guide

15 ‘Diving project’ is the term used for the overall diving job - whether it lasts two hours or two months. It can be made up of one or more diving operations.

16 A number of diving projects could take place on one site at the same time. Each of these projects could be separate from the others, and each could have a separate diving contractor in charge.

17 The diving project will finish when the diving contractor has ensured that every diver has been safely recompressed.

2(1)

Regulation  
2(1)

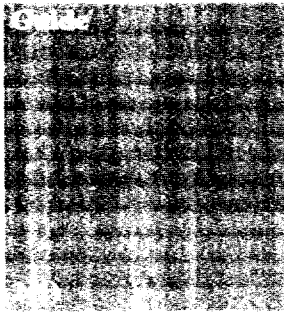
(1) *“diving operation” means a diving operation identified in the diving project plan pursuant to regulation 8(3);*

Guide

18 ‘Diving operations’ can be made up of either a number of dives or, sometimes, a single dive. A diving operation should be that portion of a diving project identified in the diving project plan which one supervisor can safely supervise. One supervisor must be appointed for each diving operation.

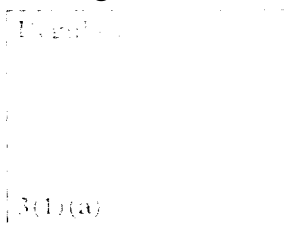
19 The diving project plan should identify how the diving project is broken down into diving operations and how many supervisors will be needed. The

2(1)



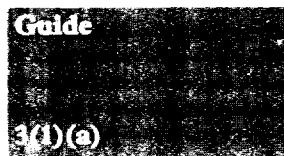
diving contractor should determine this after studying the risk assessment. Factors such as the task, site conditions and the diving technique will contribute to making this decision. For media diving projects, it is likely that each scene could be a separate operation. It is also a good idea to involve the supervisor or supervisors in the decision-making process. If a supervisor does not agree with the size or complexity of the portion of the diving project allocated to him or her to supervise, he or she should raise the matter with the diving contractor. Supervisors should not participate in a diving operation which they consider in their opinion to be unsafe because insufficient supervisors have been appointed or which they are not competent to supervise.

### Regulation 3



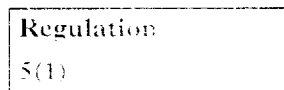
(1) *These Regulations shall apply to and in relation to any diving project apart from the following -*

- (a) *the care or treatment of patients in a hospital or other place, not under the control of the diving contractor, where emergency medical treatment is provided or in transit to such hospital or place where the means of transit is provided by or in respect of the hospital or other place;*



20 The use of hyperbaric chambers within diving projects is covered by these Regulations. However, those receiving hyperbaric treatment at a hospital or other place are outside the scope of the Diving Regulations. This is to avoid duplication of responsibilities when another authority is involved in the medical treatment of a diver.

### Regulation 5



(1) *No person at work shall dive in a diving project and no employer shall employ any person in such a project unless there is one person and one person only who is the diving contractor for that project.*



21 The term 'person' used to identify the diving contractor under this regulation means a person with legal identity such as an individual or a company and includes a body of people corporate or incorporate.

## Clients and others

### Regulation 4

Regulation

4

*Every person who to any extent is responsible for, has control over or is engaged in a diving project or whose acts or omissions could adversely affect the health and safety of persons engaged in such a project, shall take such measures as it is reasonable for a person in his position to take to ensure that these Regulations are complied with.*

#### ACOP

**22 There are a number of groups of people whose activities can have an involvement with or impact on the conduct of a media diving project and who therefore may have responsibilities for ensuring that the Regulations are complied with in relation to matters under their control.**

**23 People who may have duties under this regulation would include a customer for whom the work is being delivered, for example event promoters, sponsors, publishers, agencies or film and video production companies. Although these people may not be directly involved in the planning and organisation of the diving project they should:**

- (a) take reasonable steps to select a competent diving contractor in order to ensure that the diving contractor is able to comply with the Regulations;**
- (b) provide the diving contractor with sufficient detail of the content of the diving project to allow it to be carried out safely;**
- (c) highlight any known hazards or difficulties which could affect the safety of the diving project, such as underwater obstructions - film sets, props, etc;**
- (d) ensure that any equipment or activities under their control do not affect the safety of the diving project;**
- (e) provide adequate resources to enable the diving contractor to perform his or her duties under the Diving Regulations;**
- (f) co-operate with the diving contractor, supervisor and others involved in the diving project to enable their obligations under the Regulations to be fulfilled.**

**24 Other people who may have a duty under this regulation would include the owners of dive site locations and the operators of vessels being used as part of the diving project.**

**25 Owners of a dive site should:**

- (a) highlight any known hazards or difficulties which could affect the safety of those engaged in the diving project, such as underwater obstructions, water intakes or discharges or possible contamination;**
- (b) ensure that any equipment or activities under their control do not affect the safety of the diving project.**

4

**ACOP**

**26 Operators of vessels used in a diving project should:**

- (a) ensure that any equipment under their control does not adversely affect the safety of the diving project;**
- (b) keep the diving contractor or supervisor informed of any changes in circumstances which may affect the safety of the diving project;**
- (c) co-operate with the diving contractor and supervisor to enable their obligations under the Regulations to be fulfilled.**

**27 The duty under this regulation also extends to diving contractors, supervisors, divers and to people indirectly involved in the diving project, such as crane operators, lorry drivers, and maintenance personnel. These people should ensure that their tasks and the way they undertake them do not affect the safety of the dive team.**

4

## Diving contractors

### Regulation 5

Regulation

5

(1) *No person at work shall dive in a diving project and no employer shall employ any person in such a project unless there is one person and one person only who is the diving contractor for that project.*

(2) *The diving contractor shall, subject to paragraph (3), be the person who -*

(a) *is the employer of the diver or divers engaged in the diving project; or*

(b) *dives in the diving project as a self-employed diver.*

(3) *Where there is more than one person falling within paragraph (2) those persons shall jointly appoint in writing before the commencement of the diving project one of themselves to act as diving contractor.*

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**28 Under the Regulations, there must be a diving contractor for every diving project. The diving contractor will be the employer of the divers or a self-employed diver.**

**29 In the majority of media diving projects under this Code, it is likely that the diving contractor will be a specialist contracted by the client, ie the film production company, to take forward the diving project. The diving contractor will be responsible for engaging all the divers. The diving contractor must be satisfied that he or she will be able to comply with the diving contractor's duties under the Diving Regulations.**

**30 In some situations the employer of the divers, ie a film production company, may wish to act as the diving contractor, thereby taking on the relevant legal responsibilities. A suitable person with expertise in diving matters could be instructed to discharge *some of*\* the specialist duties on behalf of the company. The person instructed to carry out these duties must be competent to perform them.**

**31 'Competence' means having a combination of training, knowledge and experience which enables a person to do the job required in a safe manner. Evidence of past experience in organising a diving project in a safe and effective manner and appropriate qualifications would be ways of demonstrating competence. The person selected will also need the authority and resources to effectively discharge these duties. The duties will remain with the employer company which must be satisfied that the person selected will be able to perform the duties on its behalf without risk to themselves or the dive team.**

**32 If there is a group of self-employed divers taking part in the project, they should jointly agree and nominate, in writing, one of the group to accept the role and responsibilities as diving contractor for the project. This person must be competent to perform the duties of the diving contractor. This appointment must be recorded in writing.**

\*The duty to appoint a supervisor at regulation 6(2)(b) is personal to the diving contractor.

5

- (1) *The diving contractor shall ensure, so far as is reasonably practicable, that the diving project is planned, managed and conducted in a manner which protects the health and safety of all persons taking part in that project.*
- (2) *The diving contractor shall -*
  - (b) *before the commencement of any diving operation -*
    - (i) *appoint a person to supervise that operation in accordance with regulation 9;*
    - (ii) *make a written record of that appointment; and*
    - (iii) *ensure that the person appointed is supplied with a copy of any part of the diving project plan which relates to that operation;*
  - (c) *as soon as possible after the appointment of a supervisor, provide that supervisor with a written record of his appointment.*
- (3) *The diving contractor shall -*
  - (d) *ensure, so far as reasonably practicable, that any person taking part in the diving project complies with the requirements and prohibitions imposed on him by or under the relevant statutory provisions and observes the provisions of the diving project plan;*
  - (e) *ensure that a record containing the required particulars is kept for each diving operation;*

**33 The diving contractor has overall responsibility for the safety of the diving project. This will include ensuring that:**

- (a) a suitable risk assessment and diving project plan have been prepared which identify the number of supervisors, divers and equipment needed (see section ‘Diving project plan and risk assessment’);**
- (b) the size and abilities of the dive team are sufficient to enable the diving project to be carried out safely (see section ‘Dive teams and associated working practice’);**
- (c) the place from which the diving is to be carried out is suitable and safe;**
- (d) supervisors are appointed in writing (this must be done by the diving contractor) for the diving operation which they are to supervise and are supplied with copies of their formal appointment and the part of the diving project plan relevant to their operation;**
- (e) a sufficient number of suitably qualified personnel are used and are competent to undertake the duties assigned to them (see sections ‘Supervisors’ and ‘Divers’);**
- (f) the team is medically fit to dive (see section ‘Medical checks’);**

ACOP

- (g) the supervisor and dive team are fully briefed on the project and aware of the contents of the diving project plan;
- (h) suitable plant and equipment are provided and are properly maintained (see sections 'Diving plant' and 'Maintenance of diving plant');
- (i) adequate arrangements exist for emergencies, including first aid and medical treatment (see section 'Dive teams and associated working practice');
- (j) an up-to-date record is kept for each diving operation;
- (k) all other relevant regulations are complied with.

6(1),(2),(3)(d),(e)

## Regulation 7

Regulation
7(1),(2)

- (1) No person shall act as a diving contractor unless the particulars listed in Schedule 1 have been supplied in writing to the Executive by or in respect of that person.
- (2) Where there is a change in any of the particulars supplied under paragraph (1) the diving contractor shall ensure that details of the change are forthwith supplied in writing to the Executive.

ACOP

**34 Any person who wishes to become a diving contractor must provide HSE with information regarding his or her identity and where he or she can be contacted. The diving contractor is also required to inform HSE of any subsequent changes to these details. Full details required are set out in Schedule 1 to the Diving Regulations. HSE will acknowledge receipt of such information.**

7(1),(2)

## **Diving project plan and risk assessment**

- (2) *The diving contractor shall -*
- (a) *ensure that, before the commencement of the diving project, a diving project plan is prepared in respect of that project in accordance with regulation 8 and that the plan is thereafter updated as necessary during the continuance of the project;*

(1) *The diving project plan shall be based on an assessment of the risks to the health and safety of any person taking part in the diving project and shall consist of a record of the outcome of the planning carried out in accordance with regulation 6(1) including all such information and instructions as are necessary to give advice to and to regulate the behaviour of those so taking part to ensure, so far as is reasonably practicable, their health and safety.*

(3) *The diving project plan shall identify each diving operation which makes up the diving project and the nature and size of any diving operation so identified shall be such that it can be safely supervised by one person.*

**35 The diving contractor is responsible for ensuring that before the start of the diving project a suitable risk assessment and diving project plan have been prepared. The diving contractor may take on the task of preparing the dive plan or ask the supervisor to prepare one. In any event the diving contractor must check that a diving project plan has been prepared and completed in advance for each diving project and is suitable and sufficient for each diving project under his or her responsibility.**

**36 The diving project plan may refer to information from the diving contractor's own generic diving rules. This standard information should be supplemented with a site-specific risk assessment, detailing any special precautions or procedures necessary to reduce risks and listing specific emergency actions and contacts (ie the coastguard). A reconnaissance of the site is the best way to make the site-specific plan and assess the risks. A copy of the parts of the diving project plan relevant to his or her diving operation should be provided to the supervisor. Both the risk assessment and the diving project plan should be documented.**

**37 The diving project plan should specifically identify how the diving project is broken down into individual operations which can be safely supervised by one person. When making this decision the diving contractor should take into account the size and nature of the diving project.**

**38 The diving contractor should check that the divers are competent to dive to the depth required by the diving project plan.**

### **Risk assessment**

**39 When preparing the risk assessment and evaluating the dive site, the following should be taken into account:**

ACOP

- (a) **water conditions including wave motion, movement, temperature and visibility;**
- (b) **access to and from the water/boat/platform;**
- (c) **trapping and snagging hazards;**
- (d) **removal of the diver from the water in an emergency;**
- (e) **bottom conditions and hazards;**
- (f) **the use of performing artists in the project with no, or limited diving experience, and what additional safety precautions might be needed;**
- (g) **the method chosen for the dive, ie surface-supply or SCUBA and the safety reasons for the choice;**
- (h) **the type and quantity of breathing gas needed;**
- (i) **the type of diving and additional specialist equipment being used, in particular the use of equipment operated by or carrying electricity and equipment for visual effects;**
- (j) **weather conditions;**
- (k) **depth and planned duration of the dive;**
- (l) **ability of surface cover boat to stay on station;**
- (m) **overhead restrictions preventing direct ascent to the surface;**
- (n) **whether or not safety lines are being used;**
- (o) **the need to use appropriately competent, experienced and highly qualified divers in order to reduce the risk to the dive team.**

**40 This is not a complete list of all hazards and measures needed to control risks. An appraisal of the hazards at a specific dive site will identify the full extent of the safeguards needed to protect the safety of the dive team.**

**41 As a matter of safe working practice, the supervisor should keep the site-specific risk assessment under review to ensure that it is adequate and does not need to be revised.**

**42 It is important that the diving contractor exchanges information with the production team on the risk assessment and appropriate control measures.**

**43 A risk assessment made under these Regulations will cover in part the obligation to make an assessment under the Management of Health and Safety at Work Regulations 1992 (MHSWR). There will be no need to repeat those aspects of the assessment, so long as they remain valid, in any other assessment that the diving contractor carries out. However, the diving contractor will need to ensure that all significant risks not covered by the diving project assessment (including risks to members of the public arising from the diving project/diving activities) are covered by the risk assessment carried out under the MHSWR (or in any assessment required to be carried out under other specific regulations).**

6(2)(a), 8(1),(3)

## **Decompression procedures**

**44 Decompression procedures (including the use of a decompression computer) should be appropriate for the type of diving technique undertaken and their use included in the diving project plan. For surface-orientated diving, decompression procedures should be consulted to determine whether the dive requires 'in-water' decompression. All decompression procedures should be designed to take into account the risks of a particular type of dive and should include the various rules and procedures needed in order to reduce the risk of decompression illness.**

## Dive teams and associated working practice

### Regulation 6

#### Regulatory

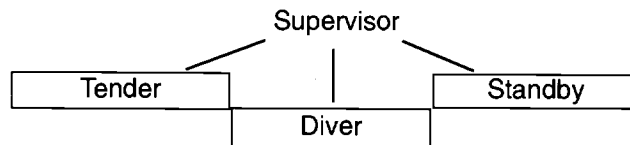
6(3)(a)

- (3) *The diving contractor shall -*
- (a) *ensure that there are sufficient people with suitable competence to carry out safely and without risk to health both the diving project and any action (including the giving of first-aid) which may be necessary in the event of a reasonably foreseeable emergency connected with the diving project;*

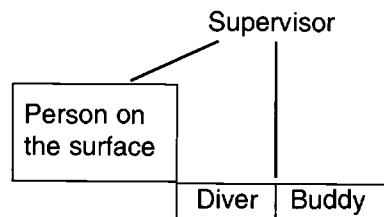
#### ACOP

**45 The diving contractor should identify the minimum size of team for a safe diving operation based on the requirements of the risk assessment and diving project plan. The team should be of a sufficient size to comply with the risk assessment and the diving project plan and to enable the diving operation to be completed safely.**

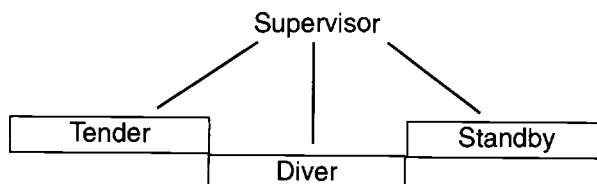
**46 For surface-supply diving the following guide indicates a minimum team size of four for benign conditions: clear water, no excessive tide or current, no trapping hazard, easy entry and exit from the water, and where the task to be performed is not arduous.**



**47 The following guide indicates a minimum team size of three for open water dives using SCUBA in benign conditions: clear water, negligible tide or current, no trapping hazard, easy entry and exit from the water, and where the task to be performed is not arduous. The dive team should be a supervisor and two divers working as a buddy pair capable of rendering assistance to each other in an emergency under water. An additional person on the surface is recommended to assist in lifting any injured diver out of the water.**



**48 For each diving project using SCUBA where the diver is being tendered on a lifeline, the minimum team size should be four:**



6(3)(a)

**49** If the dive team is to include performing artists without an approved diving qualification (see section 'Divers'), the diving project plan should set out the measures required, including what extra personnel may be needed, to ensure the safety of the divers and the performers.

**50** Standby divers for media divers should be competent and qualified to the same level as the media diver in the diving techniques being used in the diving project.

**51** Divers who are being filmed while carrying out their normal tasks, eg archaeologists or recreational instructors, should operate under their appropriate Code.

**52** All the people who form part of the dive team must be competent to discharge their duties. HSE approves certain qualifications for diving under this Code which indicate that a minimum level of competence has been assessed. Qualifications alone do not always demonstrate fitness to undertake a task. The diving contractor has a duty to engage competent people, which may entail ensuring that the dive team's competence is verified and demonstrated.

#### **Pools and tanks**

**53** For diving in tanks and pools using SCUBA, where the dive takes place in a clear pool or tank with no interference from other activities, no scenery or set, the minimum team size can be three:

- (a)** supervisor on the surface;
- (b)** a diver in the water; and
- (c)** a dedicated person on the surface who should be at least a qualified lifesaver to assist in an emergency rescue. This person does not have to be a qualified diver but they should be familiar with the diving project plan and arrangements for obtaining assistance in an emergency. He or she should not leave the dive site while the operation is taking place.

**54** The risk assessment and diving project plan must identify and record the measures needed to ensure that the diving operation takes place without risk to those taking part and in particular take account of the depth of the pool or tank and the foreseeable diving-related emergencies. It should cover how a diver, if injured or unconscious, can be lifted from the water before help arrives and how help can be summoned without delaying assistance to the diver.

#### **First-aid training and competencies**

**55** The diving contractor is responsible for ensuring that sufficient and competent personnel trained in first aid are used in the diving project. A number of members of the dive team should be trained in first-aid provision. The risk assessment should identify the first-aid equipment needed and which divers are trained to use it.

**56** The risk assessment should take into account the type of diving taking place, the size of the team and the distance of the dive site from the emergency services. It is sensible to have more than one person in the team qualified in first aid in case that person becomes injured. Those who are qualified should not hold other important duties which

**ACOP**

could conflict with the need to administer first aid in an emergency.

**57 Those identified in the dive team as being qualified to give first aid should be able to:**

- (a) recognise symptoms of decompression illness and provide appropriate first aid treatment prior to and during transfer to a decompression facility;**
- (b) administer oxygen to an unconscious patient;**
- (c) perform resuscitation using the techniques of artificial ventilation (AV) and external cardiac compression (ECC);**
- (d) recognise the symptoms of shock and provide appropriate first-aid treatment;**
- (e) administer appropriate first-aid treatment for burns, bleeding and broken bones.**

**58 There are situations where some members of the dive team should have additional training in first aid. The need for additional training may arise where remoteness from local emergency medical services means there is a need to maintain life until the emergency medical services are able to assume responsibility; or where the diver requiring first aid is inside a hyperbaric compression chamber and medical assistance cannot be provided by normal emergency medical services. The Health and Safety (First-Aid) Regulations 1981 Approved Code of Practice sets out additional advice for those areas where special additional training may be necessary to cover less common risks.**

**6(3)(a)**

## **Diving plant**

(3) *The diving contractor shall -*

(b) *ensure that suitable and sufficient plant is available whenever needed to carry out safely and without risk to health both the diving project and any action (including the giving of first-aid) which may be necessary in the event of a reasonably foreseeable emergency connected with the diving project;*

**59 The equipment necessary to perform the dive safely and without risk to health depends on the type and location of the dive and should be set out in the diving project plan.**

**60 The minimum equipment for each diver using SCUBA includes:**

- (a) breathing gas cylinder(s), cylinder valve(s) and manifold (if required);**
- (b) demand regulator (pressure reducer/first stage and demand valve/second stage), which may be combined with a full face mask or helmet, and a submersible cylinder pressure gauge;**
- (c) half mask, full face mask or helmet;**
- (d) appropriate alternative breathing gas source/secondary life support system;**
- (e) fins;**
- (f) effective cutting tool;**
- (g) protective suit suitable for the temperatures involved;**
- (h) fully independent SCUBA set which should be used for non-emergency 'buddy breathing' such as when giving air to an artist or a stunt person;**
- (i) quick-release weight belt or other means of providing positive buoyancy in an emergency.**

**61 The minimum equipment for surface-supplied diving includes:**

- (a) surface supply panel and supply hoses (if using a two-diver supply panel, a failure of the supply to one of the divers must not affect the supply to the second diver);**
- (b) second gas supply source;**
- (c) helmet or full face mask;**
- (d) appropriate protective suit suitable for the temperatures involved;**
- (e) bail-out system;**
- (f) quick-release weight belt or other means of providing positive buoyancy in an emergency.**

**62 Specially adapted equipment and alternative safety procedures may be necessary in some circumstances such as stunt diving.**

**63 For any free swimming dive the diver should have suitable auxiliary buoyancy, for example an adjustable buoyancy life or stabilising jacket, capable of fully independent emergency inflation and protected against overinflation, with another method to give positive buoyancy. Devices to determine the maximum depth achieved and the duration of the dive should be provided.**

**64 Ropes suitable for rescue should be provided for the dive team.**

**65 For dives deeper than 18 metres, the secondary life support system should be an independent SCUBA set with sufficient capacity to reach the surface, including any decompression stops or a fully redundant secondary life support system.**

**66 Any specially adapted equipment should be tested by a competent person before the dive, and verified as safe by a competent person and any necessary instruction and information provided to the supervisor and divers before equipment is used.**

**67 When using SCUBA with increased lengths of intermediate hose, the equipment manufacturer should be contacted to establish what the relationship should be between the maximum length hose and internal diameter.**

**68 Where there is a foreseeable risk of drowning, lifejackets and buoyancy aids should be available for, and where appropriate worn by, the dive team unless their diving equipment is a suitable substitute.**

#### **Communications**

**69 Suitable equipment should be provided to enable each diver to communicate with the supervisor, and when working as a buddy pair, for each diver to communicate with each other. Voice communications should be considered for all projects and should only be discounted if the risk assessment states that it would be unsafe to use or in circumstances where it would not be suitable (ie stunt divers).**

**70 Voice communications equipment should have adequate power supplies to ensure that links are not jeopardised by power failure.**

**71 If boats are used, contact with the shore party by radio is essential. At any remote site a mobile telephone should also be considered. Any battery-operated radio or telephone should have adequate reserve batteries and be either water resistant or protected. It should be tested before and during the operation.**

#### **Dealing with emergencies**

**72 For each diving project the risk assessment should include a suitable casualty evacuation plan. This should include the emergency recovery of a casualty from the water and his or her transportation to a hyperbaric chamber or specialist treatment centre. The details of the emergency arrangements should be recorded in the diving project plan. The initial stages of these arrangements should be tested periodically in order to ensure that they are effective.**

**73 A first-aid kit including a suitable oxygen administration system should be provided at the site of the dive.**

**Availability of compression chambers**

**74** The diving contractor has a responsibility to ensure the provision of facilities so that a diver can be recompressed in an emergency, should this be necessary. In all circumstances treatment should be given as soon as possible. The provision of a compression chamber should be in accordance with the decompression procedures selected as part of the diving project plan.

**75** In addition, the following advice should be considered:

- (a)** for dives with no planned in-water decompression and that are less than 10 metres the diving contractor should identify the nearest suitable operational two-person, two-compartment chamber. Under no circumstances should this be more than 6 hours travelling distance from the dive site;
- (b)** for dives over 10 and up to 50 metres with either:
  - no planned in-water decompression; or
  - with planned in-water decompression of up to 20 minutes,
 a suitable two-person, two-compartment chamber should be within 2 hours travelling distance of the dive site;
- (c)** for dives with planned in-water decompression stops greater than 20 minutes a suitable, operational, two-person, two-compartment chamber should be provided for immediate use at the site of the diving project. The diver should be able to leave the water quickly and easily and be pressurised within the chamber to the appropriate recompression pressure as defined by the time in the decompression schedule being used. The controls of a surface compression chamber should only be operated by people competent to do so. Such competence will be achieved by a combination of training and experience. The degree of supervision provided should reflect the experience of the operator.

**76** The diving project plan should demonstrate that in an emergency, where the compression chamber is not located on the site, a diver will be able to be transported and recompressed to ensure, so far as is reasonably practicable, his or her safety.

**77** If a situation arises where a diver may need hyperbaric treatment at a chamber provided by another chamber owner, then provision for this should be made in the diving project plan.

**78** If the diving contractor is responsible for transporting the injured diver to a hospital or other place, his or her duty will continue until the diver is admitted to the hospital or other place.

**79** If the use of any type of hyperbaric transportation chamber is planned for emergencies, the supervisor should be asked before the start of the diving operation to ensure that transfer is possible between the transportation chamber and the main chamber. In assessing both hyperbaric and normobaric transfers to compression facilities, the supervisor should ensure that there is a sufficient supply of oxygen available during the planned duration of the transfer.

## Maintenance of diving plant

### Regulation 6

Regulation

6(3)(c)

(3) *The diving contractor shall -*

(c) *ensure that the plant made available under sub-paragraph (b) is maintained in a safe working condition;*

#### ACOP

**80 Diving plant and equipment is used under extreme conditions, including frequent immersion in salt water. It therefore requires regular inspection, maintenance and testing to ensure that it is fit for use, and not damaged or suffering from deterioration.**

**81 In order to ensure that the equipment is maintained, the diving contractor should have a written scheme of equipment maintenance and inspection. All plant and equipment should be checked by a competent person immediately before use and this check entered in the diving operation record (see Annex 1).**

**82 The equipment maintenance scheme should be based upon the manufacturers' recommendations and be in accordance with current international, European or national standards.**

**83 Gas cylinders should be maintained and serviced to appropriate highest international, European or national standards. Breathing valves should be serviced by a competent person in accordance with the manufacturer's instructions. A written inspection and servicing record should be kept.**

**84 Any gas compressors used should be serviced by a competent person in accordance with the manufacturer's instructions. Gas purity tests should be taken as recommended by the manufacturer and a record of the results kept.**

**85 The diving contractor should ask divers using their own diving equipment to confirm that it has been serviced in accordance with the appropriate equipment supplier's service schedule and that all the cylinders have been tested for fitness-for-use in line with statutory requirements under other Regulations. Prior to the dive, this should be confirmed to the supervisor and recorded in the diving operation record for his or her operation.**

**86 The diving contractor should also ensure that before the start of the diving operation, divers will be asked to carry out a pre-dive visual inspection and check of their equipment to ensure that it is in a serviceable condition and working correctly.**

6(3)(c)

**87 Where breathing and similar equipment is likely to be shared, appropriate disinfection procedures should be used.**

## Supervisors

*(1) Only one supervisor shall be appointed to supervise a diving operation at any one time.*

### Supervisor's appointment

**88 A supervisor must be appointed in writing by the diving contractor. If a diving project is complex or takes place over such an area or time-scale that its operation cannot be safely supervised by one supervisor, then the project should be divided up and further supervisors should be appointed for separate operations. Enough supervisors must be appointed to cover the entire diving project.**

**89 Written appointments should clearly define the times and areas of control of each supervisor, and the name of the person appointed and supervising at any one time should be entered in the diving operation record. The supervisor should have immediate overriding control of all safety aspects of the diving operation for which he or she is appointed.**

**90 During the period of appointment the supervisor should not leave the dive site or dive without formally handing over to another supervisor. The hand-over should be entered in the diving operation record.**

**91 For media diving, the person who fulfils the function of supervisor under these Regulations is often referred to as the diving safety officer.**

*(2) No person shall be appointed, or shall act, as a supervisor unless he is competent and, where appropriate, suitably qualified to perform the functions of supervisor in respect of the diving operation which he is appointed to supervise.*

### Supervisor's competency

**92 The supervisor should be suitably qualified and adequately trained or experienced in the operational and safety techniques to be used in the diving operation.**

**93 The supervisor should be a media diver (see section 'Divers') with sufficient experience for the nature and type of dive undertaken. For complex sets and feature film productions, the supervisor should have additional experience of dramatic productions and sufficient authority over the whole production unit to ensure safety on the drama set/location.**

*(1) The supervisor shall, in respect of the diving operation for which he has been appointed as supervisor -*

*(a) ensure that it is carried out, so far as is reasonably practicable -*

*(i) without risk to the health and safety of all those taking part in that operation and of other persons who may be affected thereby;*

*(b) before the commencement of the operation, ensure that each person taking part is aware of the contents of the diving project plan which relate to that operation; and*

- (c) *enter in the diving operation record the particulars required by regulation 6(4) during the course of the operation.*

ACOP

### **Supervisor's responsibility**

**94 The supervisor has legal responsibility for the safety of the diving operation he or she is supervising and should be on site, in direct control of the diving operation taking place. This includes confirming that:**

- (a) **the proposed dive site and the water and weather conditions are suitable;**
- (b) **the risk assessment is still valid for the circumstances on the day of the dive;**
- (c) **all relevant authorities are aware that a diving operation is in progress, and all the necessary permits and permissions have been obtained;**
- (d) **competent divers have been appointed, including appropriate standby divers for media divers and performers;**
- (e) **the diving equipment provided is appropriate and adequate for the project and that it has been examined and inspected before the dive and noted in the diving operation record;**
- (f) **foreseeable emergencies are clearly understood by all those engaged in the diving operation. This would normally be ensured by a pre-dive briefing session with all those involved;**
- (g) **if a task requires the use of any specialised equipment, all the personnel involved are adequately trained and aware of any particular hazards and risks associated with the equipment. Personnel should also be informed of the risk assessments of the operation, and if appropriate hold a certificate of training or competency in the specialist equipment;**
- (h) **the diving operation record is accurate and kept up to date on a daily basis throughout the dive (see Annex 1 for an example of a diving operation record).**

10(d)(a)(i)(b)(c)

**95 The supervisor should also co-operate with other supervisors diving under other Approved Codes of Practice.**

Regulation 10

Regulation 10

*A supervisor may, whilst supervising the diving operation in respect of which he is appointed, give such reasonable directions to any person taking part in that operation or who may affect the safety of that operation as are necessary to enable him to comply with regulation 10.*

ACOP

### **Directions**

**96 As the person in charge, the supervisor may give reasonable instructions to any person taking part in the diving operation. This includes performing artists diving with the dive team.**

11

ACOP

**97 The supervisor has authority over anybody whose actions could affect the safety of the diving operation.**

**98 The supervisor should decide upon a common system of signals to be used between all personnel involved in the operation, and ensure that everyone is familiar with this system. This should be done before the start of the diving operation for which he or she is responsible, and be recorded in the diving project plan.**

11

## Divers

### Regulation 13

Regulation
13(1)(a)

- (1) *No person shall dive in a diving project -*
- (a) *unless he is competent to carry out safely and without risk to health any activity he may reasonably expect to carry out while taking part in the diving project;*

ACOP
13(1)(a)

#### Competency

**99 In order to be a competent 'media diver', a diver should have gained a certain level of ability in using or handling or having specialist production equipment rigged on his or herself while he or she dives. This equipment includes sound, lights and cameras. Each media diver should have received sufficient relevant training and experience on how to operate and dive safely with the equipment.**

### Regulation 12

Regulation
12(1)(a)

- (1) *No diver shall dive in a diving project unless he:-*
- (a) *has, subject to paragraph (2), an approved qualification which is valid for any activity he may reasonably expect to carry out while taking part in the diving project.*

ACOP
12(1)(a)

#### Qualifications

**100 HSE issues a list of approved diving qualifications suitable for diving under this Code. The list can be obtained from HSE. Divers must hold one of these qualifications before they can be engaged to dive in a diving project.**

**101 Additional competences and qualifications are required for some tasks; for example, in order to dive using mixed gases or rebreathers, an appropriate qualification is needed. Diving using rebreathers requires not only a qualification in the general understanding of the dive technique but an additional qualification in the specific type of rebreather endorsed by the manufacturer.**

Regulation
12(2)(c)

- (2) *Sub-paragraph (a) of paragraph (1) shall not apply to a diver who dives -*
- (c) *as an actor or performer taking part in a live performance or the recording of a performance other than a person whose work normally involves work as a diver.*

ACOP
12(2)(c)

**102 Actors and performing artists whose main work activity does not involve diving, do not need to hold an HSE approved qualification. However, they must be competent to perform the task required under water. They should not be included in the dive team and the diving project plan should address what additional measures may be needed in order to protect their health and safety.**

## Regulation 13

Regulation

13(2)

- (2) *Every person engaged in a diving project shall comply with -*
- (a) *any directions given to him by a supervisor under regulation 11; and*
  - (b) *where they would not conflict with those directions, any instructions applicable to him in the diving project plan.*

ACOP

**103 Everyone involved in the diving project, including performing artists, has a responsibility to co-operate with the supervisor and to follow any reasonable directions and instructions that the supervisor gives.**

13(2)

**104 All the dive team should thoroughly familiarise themselves with the equipment used in the diving operation. This should be done before the operation commences.**

## Regulation 12

Regulation

12(3)(a)

- (3) *Every diver engaged in a diving project shall -*
- (a) *maintain a daily record of his diving;*

ACOP

**105 Diving logs should include as a minimum the particulars recommended in Annex 2 of this Code. They should be accurate and reflect the information contained in the diving operation record.**

12(3)(a)

## Regulation 17

Regulation

17(1)

(1) *Any certificate of training and any certificate of medical fitness to dive issued, or having effect as if issued, under the Diving Operations at Work Regulations 1981<sup>(a)</sup> (“the 1981 Regulations”) shall have effect, subject to any conditions or limitations contained in any such certificate, as if it were, as the case may be, an approved qualification or a certificate of medical fitness to dive for the purposes of these Regulations.*

*(a) SI 1981/399 as amended by SI 1990/996 and SI 1992/608*

ACOP

**106 All HSE parts certificates issued under the Diving Operations at Work Regulations 1981 remain legally valid and do not have to be exchanged for the new certificates.**

17(1)

## Medical checks

### Regulation 13

Regulation

13(1)(b)

- (1) *No person shall dive in a diving project -*
- (b) *if he knows of anything (including any illness or medical condition) which makes him unfit to dive.*

ACOP

**Fitness**

**107 All persons diving have a responsibility not to dive if by doing so they might present a risk to themselves or others. They must inform the supervisor immediately if there is any medical condition which prevents them from diving safely or rendering assistance to another member of the diving team. Before every dive they must ensure that they know of nothing which makes them unfit to dive including:**

- (a) **any known medical condition;**
- (b) **any effects of drugs or alcohol;**
- (c) **any effect of medication whether prescribed or proprietary;**
- (d) **any feelings of tiredness or a feeling of being unwell.**

13(1)(b)

### Regulation 12

Regulation

12(1)(b)

- (1) *No diver shall dive in a diving project unless he -*
- (b) *has a valid certificate of medical fitness to dive.*

ACOP

**Medicals**

**108 All divers at work must have a valid certificate of medical fitness to dive issued by an HSE medical examiner of divers. The certificate of medical fitness to dive is valid for up to 12 months and must be renewed annually if a diver wishes to continue diving at work.**

**109 Where an annual medical examination is carried out less than a month before the expiry of the current medical certificate to dive, the start of the new certificate may begin from the expiry date of the current certificate.**

12(1)(b)

### Regulation 15

Regulation

15(1)

- (1) *A certificate of medical fitness to dive is a certificate from a medical examiner of divers (or from the Executive following an appeal under paragraph (4)) that the person issuing the certificate considers the person named in the certificate to be fit to dive.*

ACOP

**110 The medical examination and assessment look at the diver's overall fitness to dive. These include the main systems of the body - cardiovascular system, respiratory system and central nervous system - as well as the ears, nose and throat, vision, dentition, and the person's capacity for exercise.**

15(1)

**Regulation**

15(6)

*(6) In this regulation, “medical examiner of divers” means a medical practitioner who is, or who falls within a class of medical practitioners which is, for the time being, approved in writing by the Executive for the purposes of this regulation; and any such approval may be given generally or restricted to any class of diver or dive.*

**ACOP**

15(6)

**111 HSE approves doctors to carry out diving medical examinations. A list is available from HSE. Doctors are selected for approval based on their training in underwater medicine and their knowledge of diving. This approval is limited in duration, usually for one or two years.**

## Annex 1

### **Particulars to be included in the diving operation record**

- 1 Name and address of the diving contractor.
- 2 Date to which entry relates and name of the supervisor or supervisors (an entry must be completed daily by each supervisor for each diving operation).
- 3 Location of the diving operation, including the name of any vessel from which diving is taking place.
- 4 Names of those taking part in the diving operation as divers and other members of the dive team.
- 5 Approved Code of Practice that applies to the diving operation.
- 6 Purpose of the diving operation.
- 7 Breathing apparatus and breathing mixture used by each diver in the diving operation.
- 8 Time at which each diver leaves atmospheric pressure and returns to atmospheric pressure plus his bottom time.
- 9 Maximum depth which each diver reached.
- 10 Decompression schedule containing details of the pressures (or depths) and the duration of time spent by divers at those pressures (or depths) during decompression.
- 11 Any emergency or incident of special note which occurred during the diving operation, including details of any decompression illness and the treatment given.
- 12 Details of the pre-dive checks of all plant and equipment being used in the diving operation.
- 13 Any defect recorded in the functioning of any plant used in the diving operation.
- 14 Particulars of any relevant environmental factors during the diving operation.
- 15 Any other factors likely to affect the safety or health of any persons engaged in the diving operation.
- 16 Name and signature of the supervisor completing the record.
- 17 Any company stamp should be affixed.

## Annex 2

### **Details to be included in the diver's daily record (log)**

Details should be printed and in block capitals.

- 1 Name and signature of the diver.
- 2 Date to which entry relates.
- 3 Name and address of the diving contractor.
- 4 Name and signature of the supervisor(s) for that dive.
- 5 Location of the diving project, including the name of any vessel from which diving is taking place.
- 6 The maximum depth reached on each occasion.
- 7 The time the diver left the surface, the bottom time, and the time the diver reached the surface on each occasion.
- 8 Where the dive includes time spent in a compression chamber, details of any time spent outside the chamber at a different pressure.
- 9 Breathing apparatus and breathing mixture used by the diver.
- 10 Any decompression schedules followed by the diver on each occasion.
- 11 Any work done by the diver on each occasion, and the plant (including any tools) used in that work.
- 12 Any episode of barotrauma, discomfort or injury suffered by the diver including details of any decompression illness and the treatment given.
- 13 Any emergency or incident of special note which occurred during the diving operation.
- 14 Any other factor relevant to the diver's health or safety.
- 15 Affix company stamp after the daily record has been signed by the diver and supervisor(s).

# Glossary of terms and abbreviations

### **Buddy**

A buddy is the term given to a dive partner who in an emergency situation would be available to provide assistance to the other diver.

### **Competence**

Competence means having a combination of training, knowledge and experience which enables a person to do the job required in a safe manner.

### **Hazard**

A hazard is something with the potential to cause harm. This may include water, environmental factors, plant, methods of diving and other aspects of work organisation.

### **Risk**

A risk is the possibility that someone or something will be harmed by an identified hazard. The extent of the risk includes the numbers of people who might be affected by the risk.

### **Surface-orientated diving**

A diving technique in which the diver enters the water from the surface and then returns to the surface after completion of the dive, other than by means of a closed diving bell.

### **AV**

Artificial ventilation

### **ECC**

External cardiac compression

### **HSC**

Health and Safety Commission

### **HSE**

Health and Safety Executive

### **SCUBA**

Self-contained underwater breathing apparatus

### Major legislation

This legislation covers all industries and may be relevant to diving projects. This list is not exhaustive.

- 1 *The Health and Safety at Work etc Act 1974.*
- 2 *Management of Health and Safety at Work Regulations 1992* require employers to carry out risk assessments, make arrangements to implement necessary measures, appoint competent people and arrange for appropriate information and training.
- 3 *Workplace (Health, Safety and Welfare) Regulations 1992* cover a wide range of issues such as ventilation, heating, lighting, seating and welfare facilities.
- 4 *Health and Safety (Display Screen Equipment) Regulations 1992* set out requirements for work with visual display units.
- 5 *Personal Protective Equipment Regulations 1992* require employers to provide appropriate protective clothing and equipment for their employees.
- 6 *Provision and Use of Work Equipment Regulations 1992* require that equipment provided for use at work including machinery is safe.
- 7 *Manual Handling Operations Regulations 1992* cover the moving of objects by hand or bodily force.
- 8 *Health and Safety (First-Aid) Regulations 1981* cover requirements for first aid.
- 9 *Health and Safety Information for Employees (Modifications and Repeals) Regulations 1995* require employers to display a poster telling employees what they need to know about health and safety.
- 10 *Employers' Liability (Compulsory Insurance) Regulations 1969* require employers to take out insurance to cover their liability for accidents and ill health sustained by their employees.
- 11 *Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995* require employers to notify certain occupational injuries, diseases and dangerous events.
- 12 *Noise at Work Regulations 1989* require employers to take action to protect employees from hearing damage. The Regulations now apply offshore.
- 13 *Electricity at Work Regulations 1989* require people in control of electrical systems to ensure they are safe to use and maintained in a safe condition. The Regulations now apply offshore.
- 14 *Control of Substances Hazardous to Health Regulations 1994* require employers to assess the risks from hazardous substances and take appropriate precautions.
- 15 *Chemicals (Hazard Information and Packaging for Supply) Regulations 1994* require suppliers to classify, label and package dangerous chemicals and provide safety data sheets for them.

- 16 *Construction (Design and Management) Regulations 1994* cover safe systems of work on construction sites.
- 17 *The Health and Safety (Training for Employment) Regulations 1990* set out how certain people being trained for employment should be treated for the purposes of health and safety law.
- 18 *Carriage of Dangerous Goods (Classification, Packaging and Labelling) of Transportable Pressure Receptacles Regulations 1996* regulate the transport and labelling of pressurised gas cylinders.
- 19 *Approved Requirements for Transportable Pressure Receptacles* (to be implemented in 1998).

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