

CHILDREN'S SERVICE

Local Code of Practice 8

Health & Safety in Swimming Pools

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Author: Peter Dempsey
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Division Health & Safety Unit
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Children's Service
Local Code of Practice No 8
Health & Safety at School Swimming Pools

1. Introduction

This local Code of Practice (LCOP) has been produced by the London Borough of Barnet Health and Safety Unit. It will be issued to all community, voluntary-aided and foundation schools in the borough.

2. Aim

The aim of this LCOP is to clearly set out the LA's standard for managing swimming pools in schools and to advise Headteachers of schools with swimming pools of all the legal duties involved in running, maintaining and using a school pool. It will also look at the duties imposed on schools hiring their pools to other users.

3. Responsibilities

The responsibilities imposed on schools differ for the different types of school

- In **Community schools**, the employer is the Local Authority (LA). This means that all of the duties to provide a safe place, environment and systems of work lie with the council. As a result, this information is a direct instruction to schools, and the guidance **must** be followed.
- In **Voluntary-aided** and **Foundation** schools, the employer is the governing body and the duties for Health & Safety of staff and users lies with the governing body. In these cases, the information is advisory, and we recommend that the governing body amend their Health & Safety Policy to accept and implement the standards and systems in this guide.

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4.1 Legal Requirements

Every pool operator is responsible for health and safety. The Health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 1999 place general obligations on pool operators. The following paragraphs deal with the general legislation which all pool operators need to be aware of.

Health and Safety at Work Act 1974

The Health and Safety at Work Act 1974 places duties on employers, employees and self employed people. It protects not only people at work, including volunteers, but also the general public who may be affected by work activities.

Many of the requirements in this legislation are qualified with 'so far as is reasonably practicable'. The general requirements under the Health and Safety at Work Act are that equipment and plant are safe, the workplace is safe, there are safe systems of work and there is the provision of information, instruction, training and supervision needed to ensure safety.

Employees must do all that is reasonably practicable to take care of their own health and safety and that of others, including those undertaking voluntary work, who may be affected by their acts or omissions at work. They must co-operate with their employers in complying with statutory health and safety obligations. Manufacturers and those installing equipment have a duty under section 6 of this Act to ensure their products do not cause harm and are safe to use, including the provision of instructions on use and maintenance of equipment provided.

Management of Health and Safety at Work Regulations 1999

As a pool operator, under the Management of Health and Safety at Work Regulations 1999, you must carry out an assessment of the risks, which may affect employees, and others, as a result of the work activity. These requirements also take into account members of the public using the pools. You will then need to take appropriate action to eliminate or reduce those risks as far, as is reasonably practicable. The principles of risk assessment are listed in 4.7

The Management of Health & Safety at Work Regulations 1999 also requires employers to:

- Make arrangements for implementing the health and safety measures identified to reduce the risk
- Appoint competent people to help them implement the arrangements
- Set up emergency procedures
- Provide clear information and training to employees
- Establish procedures for employees to follow if a situation of serious or imminent danger were to arise
- Co-operate on health and safety matters with other employees who share the same workplace and co-ordinate an exchange of information about such matters
- Consult with employees on health and safety matters
- Take into account employees, age, experience and pregnancy special needs, etc

Workplace (Health, Safety and Welfare) Regulations 1992

Workplace(Health, Safety and Welfare) Regulations 1992 cover a wide range of basic health, safety and welfare issues and apply to most workplaces. The regulations expand on the general duties under the Health and Safety at Work Act

These regulations cover subjects such as: temperature, ventilation, lighting, cleanliness and waste materials, room dimensions and space, maintenance, floors and traffic routes, toilet, washing, staff changing and clothes storage facilities, supply of fresh drinking water and facilities for rest and eating meals.

Provision and Use of Work Equipment Regulations (PUWER) 1998

The Provision and Use of Work Equipment Regulations (PUWER) 1998 expand upon the general duties of the Health and Safety at Work Act and require that the work equipment supplied to employees is suitable, used safely and correctly maintained. Work equipment, regardless of its age, should not cause a risk to health and safety.

PUWER makes more explicit the general duties already placed on employers, the self-employed and people in control to provide safe plant and equipment.

Pool operators need to ensure that:

- Work equipment is suitable and properly maintained
- Their employees are properly informed about the work equipment, and given information about foreseeable abnormal situations that may occur during its operation
- Their employees are 'competent' in the use of the work equipment

Construction (Design and Maintenance) Regulations (CDM) 1994

The construction (Design and Management) Regulations 1994 apply to construction projects (including for example, refurbishment and demolition). The Regulations aim to improve the poor record of health and safety in construction by involving all those who can contribute to better management and design. There are a number of key duty holders. Clients, Designers, Contractors, and a Planning Supervisor. These regulations also introduce new documents - the health and safety plan and the health and safety file which require contribution from all the duty holders.

The CDM Regulations 1994 generally apply to construction work which is expected to last for more than 30 days (or involving more than 500 person days) or which involves five people or more on site at any one time. Regulation 13, which deals with design work, applies whenever design work is carried out for any construction project. The regulations apply if the work includes demolition or dismantling, as these activities are considered to create a higher risk to health and safety.

Manual Handling Operations 1992

Manual handling is the transporting or supporting of loads by hands or bodily force. Pool operators will need to consider the risks from manual handling to the health and safety of their employees. If risks exist, the Manual Handling Operations Regulations 1992 apply, requiring all employees to:

- **Avoid** the need for hazardous manual handling, as far as reasonably practicable
- **Assess** the risk of injury from any hazardous manual handling which cannot be avoided
- **Reduce** the risk of injury from hazardous manual handling, as far as reasonably practicable

Pool operators are responsible for assessing and reducing risks from manual handling in the workplace. A basic precaution is to provide employees with basic training in handling techniques; however, you should also consider other more direct ways to reduce risk.

Employees should:

- Follow appropriate systems if work laid down for their safety
- Make proper use of equipment provided for their safety

- Co-operate with their employer on health and safety matters

When manual handling is unavoidable, review the task and think about how good techniques can help to reduce the risk. This could include reorganisation or redesign of the task, sharing the load or using mechanical handling equipment.

Control of Substances Hazardous to Health (COSHH) Regulations 2002

As a pool operator you must carry out a COSHH assessment in order to protect your workforce and visitors against health risks from hazardous substances used at work. Once you have assessed the risks you will need to decide what precautions are necessary to prevent or control exposure. You will need to record or monitor the procedures and ensure that employees are properly informed, trained and supervised.

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995) RIDDOR

Employers, the self employed and people in control of premises where work is carried out, including pool operators, have duties under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995. They must report certain work related accidents and causes of ill health to the appropriate health and safety enforcing authority. Please refer to LCOP 4 for further details

Health and Safety (Safety Signs and Signals) Regulations 1996

These regulations require employers to provide specific signs whenever there is a risk that has not been avoided or controlled by other means e.g safe systems of work. There is no need to provide a sign if it would not help to reduce the risk, or where the risk is not significant. Pool operators will need to take into account, as part of their risk assessment, provision of safety signs as an effective way to control the risks, particularly in relation to the safe use of facilities by pool users.

Diving at Work Regulations

The Diving at Work Regulations 1997 cover all dives when one or more divers undertake work activities. The Regulations apply to everyone, from the client, who, commissions the work, to the diver undertaking the work.

Everyone has a responsibility to ensure the health and safety of those taking part in the diving project. The Regulations seek to control, by risk assessment, the hazards and risks associated with diving. The employer has a responsibility, so far as is reasonably practicable, to plan and manage the project to protect the health and safety of everyone involved.

Employers Liability (Compulsory Insurance) Act 1969

Pool operators are responsible for the health and safety of their employees while they are at work. Employees may be injured, or they or former employees may become ill as a result of their work. This may result in a claim for compensation, if they believe that their employer is responsible. The Employers Liability (Compulsory Insurance) Act 1969 places a duty upon an employer to ensure that they have a minimum level of insurance to cover compensation claims for injury or disease of their employees resulting from their employment.

Public Liability covers employers for claims made against them by members of the public. This insurance is voluntary.

Fire Precautions (Workplace) (Amendment) Regulations 1999

The Fire Precautions (workplace) Regulations 1999 provide minimum fire safety standards in workplaces (including shared areas and facilities and the means of access to the workplace). Pool operators, like any other employer, have a duty to comply with these regulations. Where you or another employer do not have control over some areas of the workplace, there is a responsibility on the owner/landlord to ensure that these areas comply with these regulations.

Health and Safety (Enforcing Authority) Regulations 1998

These regulations allocate enforcement responsibility for the Health and Safety at Work Act, between the Health and Safety Executive and local authorities. This will reduce dual enforcement in business.

Confined Spaces Regulations 1997

The Regulations apply in all premises and work situations where there is a risk that an enclosed environment may be unsuitable for work without special precautions. If there are any confined spaces (as defined in the regulations) in the school, a special work permit procedure is needed, and should already be in place.

4.2 Pool Safety Operating Procedures (PSOP)

A written Pool Safety Operating Procedure (PSOP) consists of the normal operating plan (NOP) and the Emergency Action Plan (EAP) for the pool, changing facilities and the associated plant and equipment. The plans can be kept as written documents or stored electronically, but staff must have access to them and they must be available for inspection by an enforcement officer, if required.

The Normal Operating Plan should set out the way a pool operates on a daily basis, and should include details of layout, equipment, manner of use, users group characteristics, identified hazards or activity related risks.

The Emergency Action Plan should give specific instructions on the action to be taken, by all staff, in the event of an emergency.

Staff should be made aware of the Pool Safety Operating Procedure, the Normal Operating Plan and the Emergency Action Plan and be given instruction and training on the actions to be taken in each procedure.

Where a pool is hired by organisations, such as swimming clubs, the relevant sections of the plan must be made available to the organisation and where necessary, training given and regular checks made to ensure compliance.

Details of documentation, training provided and details of when checks were made, should all be recorded. (See Appendices 1 & 2)

All parts of the Pool Safety Operating Procedure should be regularly reviewed and revised if necessary, particularly after the installation of any new equipment or after any major incident. Staff and outside organisations should be made aware of any amendments that have been made.

Please see Appendix 1 for an example of a detailed checklist outlining the key features of a Normal Operating Plan and an Emergency Action Plan

Where a pool is part of a larger complex (e.g. a school) a senior member of management should be designated with responsibility for safe pool operation.

4.3 Water Quality, Treatment and Chemical Safety

Many of the systems and processes described in this section involve potentially dangerous chemicals. The written safety policy should include the management's assessment of the hazards associated with all aspects of the plant and the control measures required to manage the risk.

The main hazards associated with pool water treatment systems include:

- Risks to bathers or employees from chemicals used in disinfecting systems. These include: irritation of skin, eyes and the respiratory system by disinfectants and disinfection by products, infection, the possibility of fire due to some disinfectants being strong oxidising agents, and leaks of toxic gases. The most serious risks are from the uncontrolled escape of chlorine gas, e.g following inadvertent mixing of a chlorine based disinfectant with acids, and of accidents, even explosions
- Unclear, opaque or cloudy water may present a risk to bathers and may indicate that the quality is unacceptable due to inadequate water treatment or may result from bather overload.
- Miscellaneous risks to employees, for example from working in confined spaces, use of electrical equipment etc
- Risks to bathers from poor hydraulic design, e.g inlets and outlets of unsafe design and operating at pressures e.g suction from outlets or buffering from inlets

Control of Substances Hazardous to Health (COSHH) Regulations 2002

Under the COSHH Regulations every employer has a responsibility to assess the risks associated with hazardous substances in the workplace

and ensure adequate steps are taken to eliminate or control those risks.

This applies to all substances that can adversely affect health, including those listed as toxic, harmful, irritant or corrosive under the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994. These Regulations apply to the majority of swimming pool chemicals, and special care should be taken when selecting and using these materials.

The Regulations also apply to risks arising from micro-organisms

A five step approach is recommended when undertaking a COSHH Assessment

Step 1

Read all the available advice, including instructions and manuals from equipment suppliers, labels, safety material, data sheets and instruction booklets from the chemical suppliers in addition to corporate guidance

Step 2

Carry out COSHH and risk assessments, to produce work procedures. Remember to keep procedures simple and easy to understand. Remember to include Normal Operating Plan, details of labels, signs and records.

Step 3

If the assessment suggests minor improvements, ensure action is taken to implement. If the necessary control measures are complex, consider whether it is possible to remove a hazard altogether or to take steps to lower the risk to an acceptable level.

Step 4

Record the findings, identify the hazards and the control measures and procedures being put into place to ensure that the pool will operate safely.

Step 5

Review the assessment and revise if necessary.

A full step by step guide to COSHH assessment is available from HSE Publications ISBN 0118854704

COSHH Guidance for schools 1989 ISBN 011 885511 5

4.4 Pool Water Testing**The responsibility of the pool operator for the safe bacteriological quality of pool water.**

The Health and Safety at Work Act 1974, places responsibility on the pool operator to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that he/she does not expose any person(s) to risks to their health or safety.

More specifically The Control of Substances Hazardous to Health Regulations 2002 requires that a suitable and sufficient assessment of all work which is liable to expose employees or other persons to substances which are hazardous to health, including harmful micro-organisms, must be undertaken. As such the operator of a swimming pool has a legal duty to undertake an assessment regarding the exposure to possible micro-organisms. It should be ensured that such exposure is either prevented or, where this is not reasonably practicable to do so, adequately controlled.

In order for a pool operator to determine whether their pool is safe and without risks to the health of any persons regarding both exposure to micro-organisms and adequately controlled exposure under COSHH, they must ensure that adequate disinfection of the pool has occurred. This must be established by bacteriological sampling.

Testing For Chemical Content

The quality of pool water is monitored and controlled by periodic analysis of water samples.

The test kits are available from a wide network of pool companies, and if accurately undertaken, and records maintained, analysis and corrective action can be taken to maintain the water quality to the highest standard.

Regardless of the age of the pool, its circulation and filtration system, the chemicals used in the treatment of the water or the volume of the use of the pool, the testing of pool water is the key factor upon which the maintenance of the water quality will be based. Even the most sophisticated automatic systems will require the same, if not more personal management as a manually operated system.

Under normal operating conditions the tests required are:

- **Chlorine & pH** every 2 hours for a manual dosing system, three times per day for an automatic plant. Although where conditions break down sampling must be undertaken as often as necessary to ensure adequate disinfection of pool water.
- **Alkalinity** - Once a week under stable conditions, more often if unstable
- **Water Balance** - once a week
- **TDS** – (Total Dissolved solids) Once a week
- **Temperature** - three times a day
- **Cyanuric acid** - once a week

A test should always be taken before the pool opens.

Tests should also be conducted whenever a large volume of water is replaced or when the water conditions are abnormal e.g. if there has been a dosing plant malfunction.

Where to take the Sample

As the purpose of disinfection is to make the pool safe for bathers, taking tests from a point in the pool where disinfection could be expected to be low is perhaps sensible. The sample should be taken from the same spot each time. The location should be agreed by all concerned to ensure consistency of results.

Taking a Water Sample

- 1 Use a plastic stoppered bottle to collect the water sample
- 2 Ensure that the sample bottle is clean
- 3 The sample should be drawn from a point 300mm below surface level
- 4 Always rinse the sample bottle several times in the pool water before taking the final sample
- 5 The test should be carried out as soon as possible

4.5 Responsibilities

Headteacher

- 1 Ensure risk assessments are produced for swimming pools and swimming activities
- 2 Close the pool if they suspect or are informed that it is unsafe
- 3 Ensure pool maintenance contractors visit at least once a week
- 4 Ensure the caretaker has adequate time to complete swimming pool duties
- 5 Ensure caretaker has completed weekly log sheets
- 6 Ensure that bathing load for the pool is not exceeded
- 7 Ensure that there are adequate numbers of qualified staff supervising swimming pool activities and that these staff are able to effect a rescue and administer first aid
- 8 Ensure all pool staff are familiar with the pools Normal Operating Procedures and Emergency Action Plan.
- 9 (Copies of these procedures should be located in a prominent and agreed location)

- 10 Ensure all staff have received relevant training to enable them to perform their duties safely.

Caretaker

The caretaker is responsible for the day to day operation of plant & equipment to ensure that the pool and surrounding areas are correctly heated and cleaned.

Backwashing, primary filter cleaning and chemical dosing are all performed correctly.

The Caretaker will maintain accurate records of pool treatments, and record air temperature, pool temperature, pH, chlorine levels. Tests should be carried out As specified in 4.3. Provision is made for keeping a list of chemicals used and corrections necessary, on the log sheet.

The caretaker should arrange with the term contractor a drain down for the period of 1 - 2 weeks per year for general maintenance and clean down of the pool.

The caretaker is also responsible for ensuring that :

- any life saving equipment is checked each day
- emergency systems are tested regularly
- comply with the pool's safe operating procedures, risk assessments, & COSHH assessments.
- Have appropriate qualifications such as ISRM Pool Plant Operators Certificate

4.6 Swimming Lessons

Teachers & Coaches of programmed session - safety qualification

A lifeguard may not be required in programmed sessions in a pool where teaching and coaching of swimming is taking place. In these situations, where the risk is limited due to the nature of the activity and the degree of control being exercised, the teacher or coach may provide safety cover. However, they should have the appropriate teaching/coaching lifesaving competences, which include rescue skills, CPR and relevant aspects of the Pool; Safety Operating Plan

Where teachers are directly responsible for supervising the swimming pool, performing the role of lifeguards in an un programmed pool session, they too should have the competencies and skills required of a lifeguard in those circumstances.

Ratios of swimmers will be dependent on:

Number of qualified staff
Size of the swimming pool
Depth of the swimming pool
Risk assessment

4.6 Risk Assessment

Principles of risk assessment

A risk assessment is nothing more than a careful examination of aspects of work that could cause harm to people. This assessment can establish whether enough precautions have been taken or if more are needed. As part of the risk assessment, pool operators will need to consider all the hazards and risks associated with the pool.

- A hazard is anything that may cause harm
- A risk is a chance, great or small, that someone may be harmed by a hazard

The aim is to ensure that no one gets injured or becomes ill.

The completion of a risk assessment requires the following 5 step approach

STEP 1 Identify the hazards.

Establish what may cause harm to employees or other people as a result of the work activity

STEP 2 Establish who might be harmed and how.

Who may be affected by the work activity e.g. public, cleaners, visitors, contractors & maintenance personnel
How might they be harmed?

STEP 3 Assess the risks and take appropriate action

If you have found a hazard, which may be a risk you need to take action to eliminate or reduce those risks as far as reasonably practicable. The action taken will depend on the hazard and if the risk is high or low.

Confirm that you have reduced risks as far as possible by checking your standards against published guidance such as HSE(Health & Safety Executive publications).

STEP 4 Record your findings

If you have 5 or more employees are must produce a written record of your risk assessment. This should show you that:

- A proper check was made
- Those persons affected were consulted
- All obvious hazards were identified and account taken of the number of persons who could be affected
- The precautions are reasonable and any remaining risk is low

STEP 5 Review the assessments from time to time and revise if necessary.

It is important to check the risk assessment occasionally, especially if there are any changes in working procedures. The assessment should reflect any new hazards, which may affect the health and safety of employees and others who may be affected by the change in working conditions.

4.7 Hiring of the pool to another user.

Responsibilities of the pool operator for lifeguard provision when the pool is hired to other people.

When the pool is hired to outside organisations the same standards will apply and will need to be included in the Pool Safety Operating Plan

Where agreement is reached that an outside organisation will provide supervision, pool operators will need to consider what, if any, additional cover may be needed, bearing in mind that:

- they retain residual responsibilities for all those who use the pool and the facilities.
- where the hire organisation shares use of the pool with the general public, the pool operator retains sole responsibility for safety.
- It will usually be necessary for the pool operator to have a responsible person on the premises who is trained to discharge the pool operators responsibilities.
- The standard of pool supervision should be detailed in the hiring agreement and the operator should ensure that the agreement is being met.

References:

Managing Health & Safety in Swimming Pools (Sports Council) ISBN 0 90 6577837
Five steps to risk assessment IND(G) 163L HSE Books (free leaflet)

Appendix 1

Pool Written Operating Procedures: checklist

Normal Operating Plan This plan should include information on:

- a) details of the pool, including pool dimensions and a plan of the building
- b) potential risk factors
- c) dealing with the public(safety education, controlling access, etc)
- d) maximum number of bathers
- e) first aid provision and training
- f) conditions for the hire of the pool to outside organizations
- g) details of any alarm systems and any emergency equipment including maintenance arrangements
- h) lifeguards duties as well as any special arrangements for use of equipment
- i). systems of work, including:
 - lines of supervision
 - call out procedures
 - work rotation
 - maximum poolside work times
 - details of lifeguard training
 - numbers of lifeguards required for particular activities

Emergency Action Plan

In addition to the normal operating procedure an emergency plan should detail the action to be taken in the event of a foreseeable emergency for example:

- Overcrowding
- Disorderly behaviour
- Poor water clarity
- Outbreak of fire or activation of an alarm
- Bomb threat
- Lighting failure
- Structural failure
- Emission of toxic gases
- Serious injury to a bather
- Discovery of a bather in the water

Appendix 2

Hire of the pool to an outside organization.

Checklist of points for the inclusion into a contract.

Hirers should be asked to provide information on the following:

1. Information on the numbers participating and their swimming skills
2. The name of the hires representative who will be responsible for the group
3. The numbers and skills/qualifications of the lifeguards that will be present during the session: and whether these will be provided by the hirer or provided by the pool operator
4. The hire should be given copies of both the normal and emergency operating procedures and should be asked to sign to the effect that these have been read and understood
5. The agreement should include specific requirements on the respective responsibilities of both the pool operator and the hirer in the event of an emergency. A distinction needs to be drawn between:
 - a) emergencies arising from the activities of the group using the pool, and
 - b) other emergencies (e.g structural or power failures etc)

Responsibility for the latter will remain with the pool operator who will need to have competent staff in attendance during the hire session.

6. Any rules of behaviour to be enforced during the session.
7. Any safety advice that should be given to participants prior to swimming eg avoiding food and alcohol immediately before swimming