

POOL GUIDANCE DOCUMENT

Education

There is a responsibility under HSWA 1974 to ensure so far as reasonably practicable (SFARP), the health and safety of employees at work and others who may be affected by undertakings. The HSE have produced guidance – HSG179 Managing Health and Safety in swimming pools which gives practicable advice on how to comply with H&S legislation. In addition to this the Industry body for pools, Pool Water Treatment Advisory Group (PWTAG) provides advice within its book, Swimming pool water: treatment and quality standards for pools and spas and within its Code of Practice, the management and treatment of swimming pool water. This is the standard that will be used by an HSE / EHO inspector carrying out an investigation. The Safe Practice in Physical Education and Sport Guidance Book also gives advice on the safe use of swimming pools. In accordance with HSE guidance HSG179, The Responsible Person (RP) of the school should develop and maintain Pool Safety Operational Procedures (PSOP). These should be defined in two sections – Normal Operation Procedures (NOP) and Emergency Action Plans (EAP). A written PSOP should include management's assessment of hazards associated with all aspects of pool, operation of the plant, and precautions to control the risk. The RP of schools with pools have a responsibility to ensure that appropriate actions to safeguard pupils, staff and others are in place. The guidance applies to school swimming pools and therapeutic pools within WLC.

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Actions	Advice	Requirements
<p>Risk assessments (RA) – ALL POOLS</p> <p>RA's to be developed by competent staff, recorded and reviewed annually, if anything changes or if an incident happens.</p> <p>Individual RA's may be required for some pupils with specific needs, recorded and reviewed.</p> <p>Safe Systems of Work (SSOW) must be developed and communicated to all relevant staff.</p> <p>Head Teacher has overall responsibility to ensure RA's / SSOW are completed, communicated and reviewed.</p> <p>Monitoring of compliance required.</p>	<p>RA's to reflect the activities of pool / plant to ensure that risks are adequately identified assessed and control measures are put in place. These must be recorded and reviewed.</p> <p>A pool should have a PSOP that identifies all likely hazards from contaminated drinking and bathing water and aerosols</p> <p>Staff using the pool must be made aware of the outcome from the risk assessment.</p>	<p>A Risk Assessment, using formal hazard analysis, targets each system in the facility, and prescribes criteria, targets and controls for ensuring each is dealt with. Verification, training, communication and review are critical.</p> <p>Risk assessments to take into account significant hazard & risk such as:</p> <ul style="list-style-type: none"> • Physical • Chemical • Microbiological <p>An assessment of all potential sources of hazards and potential routes whereby they may be transmitted, identified controls and emergency response procedures.</p> <p>Pool side:</p> <ul style="list-style-type: none"> • Changing facilities • Poolside / Swimming activities / Preventing unauthorised access • COSHH assessments <p>Plant room:</p> <ul style="list-style-type: none"> • Plant room operations • Water quality (testing and recording of results) • COSHH assessments • Machinery & equipment RA's (Maintenance & Inspection records required) <p>A communication process must be in place to ensure that all relevant parties are aware of the contents of the risk assessments, control measures and are adequately trained to carry out the operations asked of them. Any concerns are highlighted to the relevant person and appropriate actions taken.</p> <p>Dynamic RA's: Swimming instructors / PE teachers must undertake a dynamic risk assessment for every session. These should consider:</p> <ul style="list-style-type: none"> • the age and ability of the pupils in each class & the activity taking place • any additional support needs of individual pupils <p>Individual RA's may be required for pupils with medical conditions - Care plans etc. A check of individual personal health is required each time they enter the pool to ensure that they are fit to proceed safely.</p>

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		<p>First Aid Assessment of Needs – Poolside & Plant Room:</p> <ul style="list-style-type: none"> The first aid assessment of needs will determine the level of first aid provision required - contents of the first aid box / specific equipment. <p>(Lifeguard training incorporates elements of first aid to allow care to be given until further assistance arrives)</p> <p>Safe Systems of Work (SSOW) must be developed and communicated to the relevant people. Records to be kept of information sharing sessions (toolbox talks).</p>
<p>Pool Safety Operating Procedures (PSOP) ALL POOLS</p> <p>Every pool must have a recorded individual Normal Operating Procedures (NOP) Emergency Action Plans (EAP) - pools / spa/ hydrotherapy pools</p> <p>Staff must be aware of the content of the PSOP, trained and instructed to work in accordance with the provision.</p> <p>Regular reviews required of the NOP and EAP and training should be recorded by the school.</p> <p>Hiring out the pool - LETS must be given a copy and briefed on the pool NOP/EAP.</p>	<p>The PSOP consists of the Normal Operating Procedure (NOP) and the Emergency Action Plan (EAP).</p> <p>HSG179 guidance available to download from HSE website.</p>	<p>PSOP should include:</p> <p>NOP:</p> <ul style="list-style-type: none"> Details of the pool – dimensions, depths, features, equipment and a plan of the building Potential risks – main significant hazards and users at particular risk Dealing with the public – arrangements for communicating safety messages to customers Lifeguard duties and responsibilities and special supervision requirements Systems of work including adequate supervision Operational systems – controlling access to the pool Detailing work instructions including pool cleaning procedures, changing rooms First aid supplies and training including equipment required and its location Details of alarm systems and any emergency equipment, maintenance arrangements Conditions of hire to outside organisations – LETS The pool water testing regime Pool plant maintenance requirements <p>EAP - Emergency action to be taken in the event of a foreseeable emergency, for example:</p> <ul style="list-style-type: none"> Contamination of the pool i.e. bodily fluids entering the pool etc. Overcrowding / Disorderly behaviour Lack of water clarity Outbreak of fire / Bomb threat Lighting / Structural failure Emissions of toxic gases

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<p>Conditions of hire (LETS where relevant) ALL POOLS</p> <p>Head teacher to ensure LET agreements are suitable and sufficient to include all relevant factors of pool safety, health and welfare of users</p>	<p>It is recommended that the school LET agreement states who will provide qualified lifeguards as part of the hire agreement and other points contained within the checklist (next column)</p>	<ul style="list-style-type: none"> • Serious injury / fatality of a bather / Discovery of a casualty in the water. <p>Checklist of points for inclusion in hire of pool contracts - LETS:</p> <ul style="list-style-type: none"> • Appropriate insurance is in place • Information on numbers participating and their swimming skills • Name of hirer's representative who will be in charge of the group • Numbers and skills / qualifications of lifeguards to be present during the session • 1st aid provision • Hirer to be given copies of NOP & EAP and sign to confirm these are read and understood • Any rules of behaviour and safety advice to be communicated and enforced throughout the session • Specific arrangements to be agreed on the respective responsibilities of the pool operator and the hirer for action in emergencies. A distinction to be drawn between: <ul style="list-style-type: none"> a) Emergencies arising from activities of the groups using the pool b) Other emergencies (structural or power failures) <p>Responsibility for (b) will remain with the pool operator who will need to have competent staff in attendance during the LET session.</p>
<p>Pool Water Clarity - Appropriate testing and monitoring of the pool ALL POOLS</p> <p>Ensure monthly microbiological testing & analysis of water takes place as per WLC contract (construction services).</p> <p>Ensure actions from microbiological reports are followed up and completed.</p> <p>Ensure FMA's / plant room operators carry out water testing</p>	<p>The clarity of the water and the safety of bathers are paramount. It is recommended that microbiological testing is carried out, sent to a laboratory and analysed. Reports are produced and any actions on the reports must be completed ASAP.</p>	<p>Microbiological Testing required once a month – Set up through Construction services contract. Reports should be returned to the school – HT / pool staff / FMA's etc. The Head Teacher or designated person must ensure that any action on the reports are followed up and that records are kept.</p> <p>PH / Disinfectant water samples Routine sampling of water 4-5 times a day with records kept regarding PH & Disinfectant levels and the temperature of water.</p> <p>Bathing loads – a measure of the number of people in the pool. Identify and maintain a realistic relationship between bathing numbers and pool treatment plant capacity.</p> <p>As a guide, 1 bather per 3m² is stated by PWTAG, however, a Risk Assessment should always dictate the level of bathers / class size allowing for the age and stage of bathers, the activity and the level of adequate supervision.</p>

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<p>4-5 times a day and keep relevant record on PH and disinfectant parameters of the water. If the water is out-with safe parameters action must be taken.</p>	<p>Pool records to be kept for 5 years.</p>	<p>Factors that determine a maximum bathing load for a pool:</p> <ol style="list-style-type: none"> water area – space for bathers to move around and physical safety depth of water Comfort Pool type and activity <p>Several variances depends on bather cleanliness, treatment system, chemicals used, the operation of the whole system and the dilution rate.</p>
<p>Supervision & Training ALL POOLS</p> <p>Head Teacher to ensure that staff are appropriately trained and competent in poolside supervision and plant room operations as per PWTAG industry standard, the Safe Practice in Physical Education and Sport Guidance and HSE guidance HSG179. (Appendix 1)</p> <p>Regular Monitoring is required of training records to ensure all relevant staff hold a valid training certificate for the tasks they carry out.</p> <p>PPP schools – C Henderson has requested that all PPP contractors provide evidence to show the plant operation side is being carried out as per these action headings. (awaiting a response)</p>	<p>Staff training must be identified and provided for those who are maintaining and working within the pool environment.</p> <p>This should be of an appropriate level and commensurate with the activities that member of staff is carrying out e.g. plant room operation or employees who are supervising pupils in using the pool.</p> <p>Training should meet the recommended minimum standards as outlined in industry recognised publications.</p>	<p><u>Pool Side</u></p> <p>Swimming pools - Supervision / safe operating of pools generally involve the deployment of Lifeguards (HSG179) who are adequately trained. It is strongly recommended that pool lifeguards hold a current qualification issued by an appropriate national body. Where pool lifeguards are employed they must hold a valid:</p> <ul style="list-style-type: none"> RLSS National Pool Lifeguard Qualification (NPLQ) or Swimming Teachers Association (STA) Award for Pool Lifeguarding (APL) <p>If no lifeguard is provided for programmed sessions i.e. swimming lessons within the school curriculum, swimming instructors/ PE teachers can provide lifeguard cover provided they hold an appropriate lifesaving qualification which includes rescue skills, CPR & relevant aspects of the PSOP:</p> <ul style="list-style-type: none"> National Rescue Award for Swimming Teachers & Coaches or STA Pool Safety Award for Teachers <p><u>This is the minimum recognised qualification for adequate Safe Pool Operation.</u></p> <p>It is recommended that Swimming instructors/ PE teachers should not work alone on poolside where they are also responsible for lifeguard duties. Another suitably trained and competent person should be available to assist in teaching the group, assist with rescue/ first aid or supervise the rest of the group in the event of an emergency.</p> <p><u>Pool Plant Operators (PPO)</u></p> <p>The amount of training that staff responsible for swimming pool water must undertake is related to the complexity of the pool and its associated equipment, staff responsibilities and the success of the training programme.</p>

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		<p>The 2 day "Small Pool Operators" Course (SPOC) has been specifically designed to satisfy the training needs for "On site designated supervisors" (OSD's) as described in the PWTAG Code of Practice.</p> <p>Facilities Management Assistants (FMA's) or designated pool staff carry out the function of the Pool Plant Operator (PPO) within educational establishments.</p> <p>The 3 day course (Swimming Pool Technical Operators Course) is probably more applicable for Duty Officers or maintenance technician's at large local authority style swimming pools. (HSG179 gives details of various recognised organisations that can provide training).</p> <p>The extent of their knowledge should be enough to ensure they have the ability to interpret pool conditions and respond accordingly to ensure safety, hygiene and the safe handling of chemicals.</p> <p>WLC FMA's (Operational Service) are progressing with suitable training / refresher training for their staff in plant room operations</p> <p>Head Teachers (RP) are responsible for checking that staff have relevant valid training certificates.</p> <p>Head teachers (RP) are responsible for ensuring that their staff receive regular and on-going training in how to deal with a suspected or confirmed case of Cryptosporidium and that the training is recorded within the individuals staff training records.</p>
<p><u>Hydrotherapy / Therapeutic Pools</u> Head teacher must ensure adequate risk assessments, controls and monitoring of the pool.</p> <p>Safe Systems of Work and adequately trained staff – pool and plant room are required along with up to date record keeping.</p>	<p>Strict pool management is required for therapeutic pools due to the high temperature of the water and the special needs of the user / medical conditions. The client group may be more susceptible to infection or high temperatures.</p> <p>Specific monitoring and control is required to cover:</p>	<p>Water-based activity in therapeutic pools requires higher levels of supervision, often on a one-to-one basis in the water with an additional member of staff supervising from outside of the pool.</p> <p><u>Training:</u> It is recommended that staff working in the pool should have: The National Rescue Award for Swimming Teachers & Coaches or STA Pool Responder qualification - staff must be well trained in rescue procedures.</p> <p>A variety of skills are required dependant on the assessment of each child's individual requirements.</p> <p>Specific Individual Risk Assessments are required to ensure that it is safe for staff and</p>

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<p>Continual monitoring and review is required for the safe operation of the pool.</p> <p>NOP & EAP to be recorded including testing of Emergency alarms systems which must be within easy reach of the pool.</p> <p>Head teacher to ensure accurate daily log of the running of the pool is in place detailing water quality / monitoring, water and air temperature, pool appearance, backwashing, microbiological testing, together with any unusual occurrence or problem.</p>	<ul style="list-style-type: none"> • Engineering, • Temperature • Infection control 	<p>the child to use the pool taking into account any medical condition and ailments / illnesses they have on that particular day.</p> <p>A Safe System of Work must be devised and communicated to staff in terms of pre pool use checks and activities, pool activities and after pool use activities for example - the pupils should always use the toilet prior to entering the pool, if required suitable leak proof swim pant worn and a procedure for showering and dressing. All bathers (pupils and staff) must always have a shower before entering the pool.</p> <p>Microbiological testing required monthly. If the therapeutic pool is used for hydrotherapy, testing should take place weekly. This can be arranged through construction services. Analysis reports must be actioned when required.</p> <p>Water testing - The FMA should take and record daily water testing for PH, disinfectant and water temperature. Records must be kept for 5 years.</p> <p>Robust procedures must be in place for dealing with human waste contamination to the pool as cryptosporidium is resistant to chlorine. Head teachers are responsible for ensuring that their staff receive regular and on-going training in how to deal with a suspected or confirmed case of Cryptosporidium and that the training is recorded within the individuals training records.</p>
<p>Safety Signs & Swimming pool users safety codes ALL POOLS</p> <p>Head teacher to ensure adequate signage is displayed and a user safety code is in place</p>		<p>Swimming pools users guide safety code - example:</p> <ul style="list-style-type: none"> • Spot the dangers – Water presents a risk of drowning • Always swim within your ability – don't swim after a heavy meal or under the influence of drugs or alcohol • Look out for yourself and other swimmers • Learn how to help – If you spot someone in difficulty raise the alarm immediately <p>Teaching staff using pools alone, out-with school teaching hours is not permitted without a clear written safety procedure.</p> <p>Preventing unauthorised access - Swimming pools must be kept locked at all times when not in use.</p>

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		<p>Safety Signs Prohibition signs - No smoking, No Unauthorised person, no diving, no running etc. Warning signs – Toxic material, corrosive, general danger etc. Information signs – Fire exit, first aid post etc.</p>
<p>Written Monitoring Programme ALL POOLS</p> <p>Head teacher to devised monitoring procedures to ensure that implemented controls are measured</p>	<p>Record how and when monitoring will be done and who will carry this out to ensure procedural compliance.</p>	<p>Monitor the performance of the pool operation through:</p> <ul style="list-style-type: none"> • Assessment of individual and overall operational performance and records • Information on the performance of water treatment systems • Control of non-conformance to PSOP procedures • Corrective and preventative actions (if required) • Responding to incidents or other emergencies • Feedback from bathers or LETS • Follow up actions from any previous reviews • Changes that could affect the swimming pool – changes in regulations / standards etc.

Pool Management Responsibility - Senior management / Head teachers (RP) should define and document procedures for the general operation and safety of swimming pool water treatment systems. They must ensure this information is communicated, implemented and maintained throughout the organisation. Continual monitoring and review of the NOP & EAP is required alongside review and periodical testing of its emergency preparedness and response procedures – in particular, after accidents and emergencies. The Head Teachers (RP) is responsible for checking and monitoring staff are suitably training in safe operations of the pool and how to deal with emergencies. .

Appendix 1 - Training Information guide

A lifeguard can only work on poolside to the depth level stated on their certificate.

Royal Life Saving Society (RLSS) Teachers Rescue Course

This RLSS / UKCC training course includes theory and practical work, and covers the competencies and skill that enable teachers / instructors to deal with an emergency in a pool. A section is devoted to first aid and is **valid for two years**. The level of ongoing training which should be completed is not specified, however as best practice, it is recommended that regular ongoing training and practice should be carried out.

Swimming Teachers Association (STA) Pool Safety Award

This award is designed specifically to equip teachers with a range of key skills to deal competently with poolside rescue, CPR techniques and first aid competencies. The qualification is **valid for two years**. Regular ongoing training and practice is essential.

Regular ongoing training and continued professional development are required to keep these skills up to date. Records of all qualifications and training should be recorded, kept up to date and be available for inspection.

Hydrotherapy / Therapeutic pools

Water-based activity in these pools requires higher levels of supervision, often on a one-to-one basis in the water. These are not deep water pools and so, for teachers and physiotherapists, it is recommended that the **National Rescue Award for Swimming Teachers & Coaches** or **STA Pool Responder** is a suitable qualification.

There are no national qualifications for teaching swimming activities to children who have severe learning difficulties. A variety of skills are required dependant on the assessment of each child's individual requirements. Schools with hydrotherapy pools should establish a programme for new teachers to work with experienced staff before they take full responsibility for swimming sessions.

Pool Plant Operator (PPO) must be qualified to the recognised and approved standard.

The 2 day "Small Pool Operators" Course (SPOC) has been specifically designed to satisfy the training needs for "On site designated supervisors" (OSD's) as described in the PWTAG Code of Practice. As facility technicians have many responsibilities including the swimming pool they tend to fall into the category of OSD's.

The 3 day course (Swimming Pool Technical Operators Course) is probably more applicable for Duty Officers or maintenance technician's at large local authority style swimming pools.

Appendix 2 – Example de-contamination procedure

Solid stools

In the event of a solid stool entering the pool, the pool should be cleared, the FMA should be informed immediately and appropriate hygiene routines applied.

The stool should be removed using a scoop or fine mesh net and flushed down the toilet.

If all the matter is captured, pool water tests will be carried out and if the pool is operating with the appropriate disinfectant and pH values, no further action is necessary.

If disinfectant and pH values have been affected, increase free chlorine to an appropriate safe level and monitor the values. Any equipment used in this process will be disinfected.

Vomit

In the event of vomit entering the pool, the pool will be cleared, the FMA informed immediately and appropriate hygiene routines applied. Large particles removed using a scoop or fine mesh net and flushed down the toilet. Pool water tests must be carried out and if the pool is operating with the appropriate disinfectant and pH values, no further action is necessary.

Chlorine will normally neutralise the particles but if it is through that the person is suffering from any illness, the procedure for **Diarrhoea** should be followed. Any equipment used in this process will be disinfected.

Diarrhoea

Where loose stools or diarrhoea has been introduced to the pool, there is a risk that the parasite cryptosporidium is present which is resistant to chlorine. The pool should be cleared immediately and appropriate hygiene routines applied. Pool water tests should be carried out regularly for the duration of the closure to check that the maximum disinfectant levels are being maintained.

The filters should be left for a settling period before re opening. The pool will be re opened when the chlorine levels and temperature are within the normal operating levels.

Please note this is an example de-contamination procedure and the head teacher (RP) of the school must ensure that the competent person who maintains the water clarity within the pool develops the procedure for cleaning the water after vomit or faecal contamination has occurred.

The Safe System of Work (SSOW) for dealing with Diarrhoea in swimming pools should be displayed within staff areas and linked into on-going training.

Appendix 3 - Guidance for the management of a suspected or confirmed Cryptosporidium incident.

Guidance on Emergency Procedures / Cryptosporidium can be found in section 9 of PWTAG code of Practice <http://pwtag.org/code-of-practice-feb-2015/>

Maintaining excellent swimming pool water is a key element in the delivery of a healthy, safe and enjoyable customer experience within swimming pools.

Improvements in methods of water sampling and an increased frequency of testing have led to greater levels of Cryptosporidium detection in drinking water, green field environments and in swimming pools.

Notification of a Suspected Cryptosporidium Incident

Bathers who have suffered possible Cryptosporidium related illness may report this directly to staff at the Swimming Pool or school. This information should be passed to the head teacher and other bathers should be advised to contact their Doctor if they have not already done so. A doctor will be able to confirm cryptosporidium incidents.

Notification of illness may also come via communication between Public Health Bodies, doctors and Environmental Services. On confirmation of a suspected or confirmed incident or outbreak the school EAP must be implemented and Education SMT and Health and Safety must be advised immediately.

In the event that there is an accidental release of Diarrhoea from a bather into the swimming pool, there is the possibility that Cryptosporidium will be present within the diarrhoea. As Cryptosporidium is resistant to chlorine, the procedures as detailed in the EAP must be implemented.

Investigation

Environmental Health Officers will initially perform the lead role in the investigation of an incident or outbreak, with possible assistance from the Health and Safety Executive (HSE). They will establish the standard of operational management at the facility. Every effort must be made to co-operate and assist in this process including full access to the appropriate documentation, logbooks and records.

Initial investigations will focus on the pools compliance with those guidelines issued in Management of Public Swimming Pools and the Pool Water Treatment Advisory Group (PWTAG) Key factors are:

- Water Treatment;
- Maintenance of the water treatment system;
- Use of coagulants;
- Procedures and frequency for the Backwashing of filters;
- Staff competency and training records;
- Water sampling and testing records;
- Suitability and condition of the filtration system;
- Reputation and suitability of any contractors constructing or maintaining filtration system.

Investigations will also seek to clarify the numbers of bathers who use the pool on a weekly basis, how faecal incidents are dealt with and the recording of such incidents and the cleanliness of the pool environment will also be key aspect of the assessment.

Specific attention will be on the clarity and evidence of material aimed at stopping customers from swimming when suffering from a gastrointestinal infection and for 14 days after.

Determining an Ongoing Risk

If an established link between cases of cryptosporidium and the Swimming Pool exists, the focus of attention will be on any potential ongoing risk.

A combination of factors will demonstrate an ongoing risk, including WLC Environmental Health confidence in the operational management of the pool treatment systems, whether further cases have been reported, and the existence of any oocysts in the swimming pool water.

Sources of information

HSG179 Managing Health and Safety in Swimming Pools

<http://www.hse.gov.uk/pubns/books/hsg179.htm>

Swimming pool water: treatment and quality standards for pools and spas book.

Pool Water Treatment Advisory Group 2009, ISBN 0951700766.

Code of Practice - THE MANAGEMENT AND TREATMENT OF SWIMMING POOL WATER

Pool Water Treatment Advisory Group 2015

<http://pwtag.org/code-of-practice-feb-2015/>

The Safe Practice in Physical Education and Sport Guidance Book, ISBN: 978-1-905540945