

Paddling pools operation

Definition

For the purposes of this information note a paddling pool is an area of shallow water designed for children to play in. This information note does not relate to paddling or kiddies pools provided in a swimming pool complex but rather to paddling pools that are often located in a park or children's play area.

General

A paddling pool has hazards and potential dangers for which a Risk Assessment should be carried out. The results of the assessment should be the basis of Written Operating Procedures that may take the form of Normal Operating Procedures and an Emergency Action Plan.

The Risk Assessment should consider all aspects pertinent to the pool, i.e. its size, depth, shape, location, security, access, users etc. Special care must be taken when studying the risks of possible pool water contamination as well as when setting the level of supervision. "Managing Health and Safety in Swimming Pools" HSE book, HSG179, provides important guidance.

Unauthorised use and Safety when not in use.

A paddling pool should ideally be located in a self-contained secure area in order to avoid possible unauthorised use or vandalism. Using the example of outdoor swimming pools "Managing Health and Safety in Swimming Pools" says, "High walls and fences may be inadequate deterrent to prevent unauthorised use". The risks should be assessed and appropriate measures taken to reduce identified risks, e.g. the installation of intruder lighting and/or alarms. Signs prohibiting unauthorised use should also be displayed.

For some paddling pools of substantial size and depth these measures will be appropriate and suitable. For others whilst some security is desirable, to prevent young children from straying in, as well as to keep out unauthorised users (particularly dogs), the risk of serious injury from unauthorised use is likely to be less than for outdoor swimming pools. In addition, the location may not be suited to high fences or high walls. In these cases security and safety precautions to prevent drowning will need to be provided in another way. Consideration should be given to:

- A pool cover of a type which is secured around the edge of the pool such that it can support the weight of a person, *alternatively, and a strong recommendation within this guidance note,*
- The pool should be emptied of water after every use thus ensuring there is no risk of drowning accidents.

There is still the hazard of someone falling into the empty paddling pool but this can be safeguarded against through the use of either a protective boundary or the paddling pool could stand above ground surrounded by an upstand.

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There should be a designated user zone around the paddling pool with a minimum distance from the pool edge to the boundary enclosure of two metres, though the distance could be much greater. The height of the boundary should be about 0.75m (30 inches) and the entry points should be fitted with gates that will secure on closure and be difficult for the very young to open.

Supervision and Rules

“Managing Health and Safety in Swimming Pools” make it quite clear that paddling pools are included within the guidance from the Health and Safety Executive. Using the flow chart given in this document to show if a paddling pool requires continuous supervision or not would reveal that most paddling pools do require supervision; for while they are very unlikely to have depths of water greater than 1.5m, allow diving from the side, have abrupt changes in depth, or have restricted access, it is quite possible for the pool to

- be greater than 170m² in area,
- have additional features posing risks
- have food and drink available.

And, almost certainly:

- unaccompanied children under 15 years old would use the pool,
- at peak times crowding could occur
- and the activities are likely to generate high excitement.

Managing Health and Safety in Swimming Pools goes further in its guidance on paddling pools detailing that “Where a paddling pool is provided separately, such as in a park, there will be a need to consider the arrangements for its safe operation and these should include:

- Daily routines for cleaning and inspection
- Provision of signs governing its use and the responsibility of carers for children
- Provision of signs relating to unsafe situations and emergencies

Unsupervised use.....

There is a clear distinction between paddling and swimming pools and it is implicit that where the Risk Assessment shows it is appropriate then some paddling pools may be operated without constant supervision, dependant on the hazards of the pool, the characteristics of the users and management arrangements in place.

One of the necessary management arrangements is to ensure that on every occasion before use a paddling pool has been inspected and is fit for purpose, and also that there are appropriate signs

and regulations in place which are enforced. Then it must be clearly stated and understood that the paddling pool should only be used by young children, who must be accompanied by their carer(s) who should be a responsible adult and, who has the responsibility for ensuring their safety. However, even with this type of arrangement it will be necessary to have some occasional supervision, if only to ensure that the house rules are being practised by users.

Supervision and the NOP.....

Other paddling pools that pose greater risks may require stronger supervision arrangements and bearing in mind that very young children are attracted to paddling pools the operator should always err on the side of safety. The operator’s “Duty of Care” must always be greater where attendances of young children are predicted. Where Risk Assessment shows constant supervision is required, for instance in a busy paddling pool with play features, then the form that this should take, i.e. how many, when, where and how must be predetermined and written down. Training must also be given to staff in accordance with the Written Procedures to ensure they are competent to carry out the task.

Rules for the use of a paddling pool are necessary. They should be simple to understand and apply, but most of all monitored and enforced. Appendix A shows a typical set of regulations for users of a paddling pool.

Signage is very important for paddling pools and for pools that do not have constant supervision these should give guidance as to what to do in an unsafe or emergency situation. Particular consideration must be given to signs that indicate the water depth at various points around the pool and the conditions in which the pool water becomes unsafe - due to cloudiness or pollution. The procedures for all unsafe and emergency arrangements must be detailed in the Written Operating Procedures. Information, guidance and instructional notices to public should be displayed in prominent places.

Disinfection And Filtration

In accordance with Health and Safety legislation and in particular COSHH Regulations, the users of a paddling pool must not be subjected to the risk of waterborne infection. The operator must ensure that the pool has not being polluted during closure and that there is no broken glass or other hazards in the pool. For most paddling pools this will

require an operating regime where pools are emptied and filled each day. Pools should be thoroughly brushed prior to refilling and the pool water treated with a disinfectant. It is strongly recommended that the best way to ensure a pool is maintained in a safe bacteriological condition is by means of a continuous circulation and simple filtration system with automated chemical dosing through an erosion or similar type feeder. Paddling pools without any water circulation system are not recommended. Operators of pools without circulation should endeavour to initiate a conversion as soon as possible, as otherwise, there is little chance of operating the paddling pool safely.

Disinfectant levels..

As a disinfectant for the pool water it is advisable to use a chlorinated isocyanurate, since this form of chlorine contains cyanuric acid and this has the advantage of stabilising the chlorine in the pool and preventing its dissipation by sunlight. Care should be taken to avoid chlorine lock by aiming for a cyanuric acid level of 100 mg/l and below, aided by the regular use of a cyanuric acid test kit. A Free Chlorine test should take place prior to the pool being opened for use. For paddling pools operating without a stabiliser the operational levels of Free Chlorine should be maintained between 1.0 and 3.0 mg/l as determined by regular tests. For paddling pools operating with isocyanurates or hypochlorite in conjunction with cyanuric acid, the operational levels of Free Chlorine should be maintained between 3.0 to 5.0 mg/l. The recommended minimum values for Free Chlorine to Cyanuric are:

CYANURIC mg/l	CHLORINE mg/l
50	2.0
100	2.5
200	3.0

Microbiological tests must be taken at the start of the season and thereafter on a monthly basis.

Pool outlets....

In accordance with previous guidance from the Institute of Sport & Recreation Management, the pool circulation line outlets must be intrinsically safe.

- No pool should have just one outlet;
- there must be at least two outlets to each suction line
- outlets protected with permanently fixed grilles with apertures of no more than 8mm.
- outlets must be designed so that a body cannot completely block them

- the flow rate through them should be less than 0.5m/sec.

Flow rate control and the prevention of vortex action by ensuring that outlets are fitted to sumps are the most effective ways of ensuring that outlets do not cause hair entrapment.

A control regime should be set up to take into account all tasks, such as checking the pool, emptying, cleaning, refilling, checking the chemical dosing system, record sheets, testing for the level of Free Chlorine, etc.

The housing of the plant and chemicals associated with the paddling pool must be safe and secure with the usual precautions taken for the storage and use of hazardous chemicals.

Cleaning Regime

Paddling pools are often the target of unauthorised visitors at those times when the facility is closed, particularly later in the evening. Cyclists, skate boarders, skaters, and others that just vandalise a paddling pool will often leave broken glass or other dangerous items, litter, etc.

Thus, the regime must include an allowance for cleaning of the pool and its surrounds every morning, whether the pool is emptied or not.

Clear glass, when in the pool water, is most difficult to see and great care must be taken to ensure the pool is free of this hazard. Daily emptying of the pool, brushing and refilling is the surest way to maintain a pool free from debris, particularly glass.

Winterisation And Pre-Season Preparation

The winterisation of a paddling pool depends on the dimensions and type of pool as well as its site security. Generally, whenever possible, paddling pools are left empty of water during the closed period. Regular visits must be programmed to ensure leaves and debris are kept to a minimum as well as to ensure that the facility is not suffering undue damage from vandalism, seasonal change, etc.

Whilst most paddling pools are left empty during the closed period, if the pool has deep sections then structural damage can occur due to ice and frost damage or ground pressures pushing upwards, particularly on sites that have a high water table. To prevent this it may be essential to leave some water in the pool, in which case the matter of site security becomes of paramount importance to avoid a possible drowning. Further,

if the pool is to be left full, then the water should be super chlorinated at shut down together with the addition of a winterising compound with a long lasting algaecide and scale inhibitor. As a precaution against the pressure of expanding ice a car tyre with an inflated inner tube should be left in the water to absorb the pressure. Pools left with water in for winter, and pools with deep areas should be safely covered or other wise secured, to prevent people and pets accidentally falling in.

The circulation and chemical dosing plant should be protected to ensure that there will be no damage due to freezing within the system during the winter season. This usually entails the draining of water from the filter shell, circulation pump and any vulnerable pipework. All valves should be left open and drain plugs removed. The chemical dosing lines should be cleaned and left clear while all chemicals should be stored in accordance with the manufacturer's or supplier's instructions. In accordance with any planned maintenance schedule, the pump, motor, etc. should be serviced as appropriate during the down season and ideally stored with the chemicals, safely off site.

Pre-season preparation is usually straightforward. However, the winter weather can cause flaking of the top painted surfaces or parts of loose cement/concrete. Once the surfaces have been made good repainting can take place with paint suited to a submerged application, which will not react to the disinfectant. Painting is often necessary each year and provides a useful water seal to any hairline cracks in the tank surface. If a change of surface is required, then it is necessary to totally remove the original coating, usually involving blast cleaning. As with any paint application, proper surface preparation is important and the manufacturers instructions should be followed both for preparation and cure conditions and time.

During the closed period the opportunity to inspect the paddling pools' outlet(s) must be taken as well as the checking to ensure that the drainage run is clear and flows freely. All aspects of the facility such as the surrounds, security/condition of any fencing, etc. should be considered with enough time for the essential maintenance and repair works to be carried out before the paddling pool is opened. The re-commissioning of any plant is routine and should be in accordance with the operating procedures. Initially care should be taken to ensure that there has been no unforeseen defect introduced to the system during the closure

period (e.g. burst low level pipework that could not be drained).

Particular care should be taken with electrical equipment. The incoming electrical isolator box and any other electrical switchgear, wiring, etc., should be inspected and proved sound by a qualified electrician before any attempt is made to switch on the isolator and use the supply.

At the time of re-opening, an inspection should be undertaken and recorded. The water of the paddling pool should be tested bacteriologically to ensure its safety and to confirm the efficiency of the water treatment system.

APPENDIX A

PADDLING POOLS

REGULATIONS AND SIGNS TO BE CONSIDERED

1. This paddling pool is for the use of young children only.
2. All children inside the paddling pool enclosure must be accompanied by a responsible person who is responsible for the child at all times.
3. Babies and children should not wear nappies in the paddling pool but a purpose made costume for swimming pool use.
4. NO DOGS are allowed in the pool or pool enclosure.
5. Glass bottles, glassware or china must not be brought into the pool enclosure.
6. The surrounds of the paddling pool may be slippery, so to avoid accidents please no running in the pool area.
7. Please no food or drink in the pool enclosure area and ensure no litter is left around the pool. Users should make use of the bins provided or take items home.
8. The paddling pool is a bare foot area; no skateboards, roller skates, bicycles or other such equipment shall be brought into the pool or pool enclosure.
9. This is a shallow water paddling pool not for swimming or diving.