



## TECHNICAL NOTE

### 65 – Hiring out above ground domestic temporary pools How to use them and when not to

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Although this technical note refers to Above Ground Pools (AGP's) for hire, both in and above ground domestic pools should be treated in the same manner. AGP's are featured specifically here because of the increased rise in popularity and extension of use for commercial gain.

Temporary pools used are often above-ground pools (AGPs) and they have been around for years – for domestic garden use mainly, though some commercial designs have been successfully deployed in more formal swimming events. This technical note is about how they should be used, but also warns against domestic AGPs being used as temporary pools commercially, in teaching for example, mainly due to concerns for water hygiene quality.

Domestic pool owners increasingly consider softening the financial impact of running the pool by hiring it out. But this needs some careful planning about the pool. Owners need to consider both its condition and its status. So this technical note deals with the safety and legal issues as well as water management. It applies both to a pool being hired on its own without additional facilities, and when the hire includes premises. It covers both short and long-term hire.

#### Operating parameters

Normally AGPs come as inflatable structures, or tubular steel frames or steel or wooden or fiberglass with the pool liner attached to the frame. This type of pool is designed for use by a family in a domestic setting. With more bathers and increased usage, the pool's circulation and filtration system may not be able to cope with the increased demand, causing water quality problems that could be harmful to bathers.

If a domestic-style AGP is being considered for wider use, including hiring it out, owners need to review its bathing load, filtration, disinfection, testing and drainage. All of this is dealt with in detail in the PWTAG book, [Swimming Pool Water](#), its [Code of Practice](#) and the [Technical Notes](#).

#### Bathing load

Once established on PWTAG guidelines, the bather load should be recorded and observed. If the calculated load numbers are approached, or exceeded frequently, then attention may need to be given to increasing the treatment plant capability, additional dilution of the pool water with fresh water, the use of secondary disinfection – UV or ozone and reviewing the bathing load.



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### Filtration

Domestic above-ground pools usually have cartridge filters. These typically remove only particles that are 20 to 60 microns in size. So there is no protection against much smaller particles, including *Cryptosporidium* oocysts and pathogenic bacteria such as *E.coli* 0157 and *Pseudomonas aeruginosa*. *Cryptosporidium* is a relatively common cause of gastrointestinal illness and can enter the water from faecal accidents and is resistant to disinfectants. Cartridge filters also need regular manual cleaning, a process that carries a risk of contamination. If an AGP is to be used commercially, a medium-rate sand filtration system is recommended.

### Disinfection

AGPs sold for the domestic market do not usually come with an automatic dosing system. They rely on the user hand-dosing chemicals into the water. If the pool is being used for more than one family, this gives the operators little chance to achieve the constant necessary level of chemicals required to maintain the water quality. Whilst pathogens such as *E.coli* O 157 introduced during a faecal accident for example are very sensitive to chlorine maintaining effective chlorine levels is more difficult in outdoor pools, even small time lapses in treatment levels may result in inadequate disinfection particularly in pools used by children. In a commercial setting, hand-dosing is not recommended because of the difficulty in maintaining a constant necessary level of disinfectant at the pH value required.

### Chemical testing

AGPs in commercial settings should be tested **chemically** prior to use and every two hours to maintain water quality. This would normally consist of a test for disinfectant level (free and combined chlorine) and pH value. All testing equipment should be calibrated monthly – any electronic testing equipment annually – by the manufacturer/supplier, and used in line with their guidelines. Monthly **microbiological** tests are required if the AGP is being used commercially, in line with PWTAG guidelines, at a UKAS-approved laboratory. Tests should include aerobic colony count, coliforms, *Pseudomonas aeruginosa* and *E coli*. There are details in PWTAG Technical note 53.

### Draining the water

Domestic AGPs need to be emptied more frequently if used commercially, as they are not designed for larger bathing loads and chemical residues will build up. Emptying the pool should not be done without a discharge consent from the local water company responsible for the sewage arrangements water supplier. The consent will specify the required water characteristics and where it can be discharged to.



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The relevant Environment Agency has further details. For England they can be contacted via their National Customer Contact Centre 03708 506506. In Wales it is Natural Resources Wales on 0300 065 3000 (general enquiries). In Scotland, the number is 03000 99 66 99 and in N Ireland it is 0300 200 7856

For England, the **EA website** gives the latest advice. This technical note draws on information available in the EA's Quick Guide 401-12 *Water Quality Permitting: Swimming Pool Discharges to Surface Water and /or to Groundwater*.

In all cases, the EA recommends preliminary discussions with local environmental health officers to establish if the proposals are acceptable and whether a permit application is required. Wherever possible, the discharges of both drain-down water and backwash from filters should be discharged via mains drainage, with the agreement and permission of the local sewerage undertaker where appropriate. Where discharges are made to surface water or to ground groundwater, then these are regulated under the Environmental Permitting Regulations (EPR) 2016. Discharges are also subject to the requirements of the **Water Framework Directive**

In general terms, all drain-down and backwash water will have to be discharged into a mains sewer after notification and permission of the local water supplier, and that discharge will be chargeable.

In the domestic context, discharge of drain-down and backwash water has been allowed onto the ground or into an infiltration system/soakaway, but with certain strict conditions. Both types should be left to stand (passive venting) in a holding tank, to allow disinfectant concentrations to reduce before disposal.

### **Going commercial?**

While it may be tempting to use domestic AGPs commercially, due to their relatively low cost, this note underlines the drawbacks. There are many factors that need to be considered if bathers are to be kept safe and healthy. These factors have added complexity when the temporary pools are sited indoors, or under an enclosure). Further consideration needs to be made for ancillary facilities, i.e. changing, shower and toilet provision. It might well be safer to find other venues, or to find AGPs that have been designed for commercial activity. But if a domestic owner is considering it, safety is the first consideration

### **Safety**

Before hiring out starts, there should be a careful health and safety check, particularly of the pool and pool area.



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- Is the boundary of the property secure enough to prevent unwanted guests, particularly children, getting in to the pool?
- Is the pool secure from animal use
- Unauthorised access should be prevented with a safety device (e.g. fence) is the access secure (the fence unclimbable) and are there any items close to the fence to make it climbable?
- Is there suitable and safe access and egress to the pool
- Are there warning signs to indicate the presence of a pool?
- Are there signs to indicate the water depths?
- Are there signs to remind users to be vigilant and for adult supervision of children?
- Is the plantroom secure? If not are the chemicals, in particular, out of reach of children?
- Is there suitable safe secure storage protected from sunlight for chemicals needed because of increased usage?
- What changing, toilet and shower facilities are there?
- Are there arrangements for pre swim hygiene and preventing material getting into the pool from users' feet?

This is not an exhaustive list.

How much safety coverage is needed will depend also on whether the intended use is to be programmed or unprogrammed sessions. Their definition can be found in *HSG 179 Managing Safety in Swimming Pools*. Unprogrammed sessions may require a manned presence or other methods of supervision to ensure that legal duties are met. It should be noted that HSE deems domestic pool hire to fall within the Health & Safety at Work Act

It is also critical that there is a Pool Safety Operating Procedure (PSOP) in place and that appropriate risk assessment is undertaken. The water should be tested regularly for chlorine and pH – at least every two hours – when the pool is being operated. When testing for chlorine and pH a photometer or comparator is more accurate and appropriate than test sticks when the pool is to be used for anything other than domestic purposes. A full microbiological test for Aerobic colony counts @ 37C (24hrs), Total Coliforms, *E.coli* and *Pseudomonas aeruginosa* should be done monthly by a UKAS-accredited laboratory.

Drains and outlets, including their flow rates, may need to be modified to comply with BS EN 13451. Suitable rescue equipment should be easily to hand, including emergency instructions for use, tailored to the pool and surrounds with appropriate training for people responsible.



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Any operator should have appropriate and sufficient training in how to operate the pool and comply with the PWTAG Code of Practice and the facility should have a Pool Technical Operating Procedure (PWTAG CoP Annex B).

All of this documentation should form part of the Pool Safety Operational Procedures and Integrated Management System for the swimming pool. This includes Normal Operational Procedures and Emergency Action Procedures

### **Other Considerations**

The Owner must also consider change of use and planning permission, Tax and mortgage implications and Insurance. Further advice on these issues is available from SPATA.

### **Pool plant capability**

Clearly the pool must be able to cope with the new use. This issue is dealt with above under Operating parameters. But the main issues are:

- filter capacity and coagulant dosing
- type of primary disinfectant
- dosing equipment
- heating capacity
- heating and ventilation systems
- bather loading

### **Maintenance**

If the pool is to be let for a form of short term use (up to 4 weeks) then it is unreasonable for the leasee to be expected to look after the chemical and mechanical maintenance. A pool professional or an experienced pool owner should carry out daily chemical checks and at least weekly mechanical maintenance.

A swimming pool should be visited at least once a week by a swimming pool technical operator (SPTO) as well as daily water testing.

The public area of the swimming pool would be subject to fixed electrical testing under the Electricity at Work Regulations 1989 and the IET Wiring Regulations.

### **Running costs**

As a minimum the owner should be prepared for increase utility costs due to increased water usage. More backwashing will increase the energy required to heat the cold fresh water introduced into the system. Every pool will be different and this is difficult to estimate.



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The owner can anticipate increased chemical costs to maintain the appropriate disinfectant levels and pH. Other chemicals may be required to keep the pool water safe and comfortable and the facility clean.

### **Instructions**

It is essential that there are adequate written, instructions about what should and should not be done in the swimming pool area. This would form part of the PSOP. This may include warning signs about no unattended children no diving, general behavior, glasses use in the pool, alcohol etc.

If there is a pool cover, instructions should include its operation. The cover must be put on the pool after swimming and certainly before the facility closes. All bathers must be out of the water before the cover is put in place. Before the start of a session, the cover must be fully removed and hygienically stored before bathers enter the water.

It should be clear that the plantroom is out of bounds to the users and must be secure. The pool area must be left clean and tidy at the end of each day.

### **Changing and showering**

The owner would need to consider the provision of changing rooms and showering facilities. Pre-swim showering significantly helps maintain water quality. It is important that safeguarding issues around children and vulnerable adults are considered.

### **Emergencies**

Under the Management of Health and Safety at Work Regulation 1999 Regulation 8 an operator should have a procedure for serious and imminent danger. As well as 999, the owner should also provide contact numbers for a local doctor, a chemist and the pool maintenance company

The sort of problems that can emerge include overcrowding, disorderly behaviour (including violence) loss of water clarity, fire, lighting failure, structural failure, emission of harmful gases, serious injury to a bather and discovery of a casualty in the water

### **Appointing a consultant**

Monetising the use of a swimming pool can seem overwhelming. There are many organisations that will recommend consultants to help navigate this area; SPATA is one.