



BASFORD HALL

SWIMMING POOL WATER DISCHARGE PROCESS AT THE BATH HOUSE

Introduction

The Swimming pool at the Bath House will contain c. 59,400 litres and will contain chlorine, which is used as a disinfectant to kill bacteria and other pathogens, ensuring the water remains safe for swimmers.

When maintaining the swimming pool and discharging water it will be ensured that chlorine levels are within safe limits to avoid environmental harm. This report outlines our procedures for managing and treating the swimming pool water before it is released.

There are 2 reasons when the pool discharges water and below is how they will be dealt with:

1. **Backwashing the sand filters every 2-4 weeks**
2. **Fully emptying the pool in the event of a major maintenance issue**

1. Backwashing the sand filters every 2-4 weeks

Sand filters tend to need backwashing more frequently than other types of filters. For this size pool, backwashing every **2-4 weeks** is common. For each backwash c.3000 litres of water will be released. This will be released into a holding tank. The primary purpose of the holding tank is to allow time for chlorine to naturally break down and dissipate from the pool water.

Chlorine Breakdown Mechanisms: Chlorine dissipates from the water through both physical and chemical processes:

- **UV Degradation:** Chlorine breaks down over time when exposed to sunlight. Ultraviolet (UV) rays from the sun degrade chlorine molecules into less harmful substances.
- **Aeration:** When water is exposed to air in an open tank, chlorine can volatilize (evaporate) into the atmosphere.
- **Chemical Degradation:** Chlorine slowly degrades into chloride ions and other by-products, a process which is accelerated by factors such as heat, time, and the presence of certain chemicals. This is a naturally occurring process that occurs in the holding tank.

Time Required for Chlorine Dissipation:

Typically, we will be holding the water for chlorine dissipation from **24 to 48 hours**. But to ensure that chlorine concentrations fall within safe limits before discharge, water in the holding tank will be tested using a chlorine test kit or sensor. This will help determine when chlorine levels are sufficiently low (generally under 0.1 ppm) and safe for release into the environment.

We will not release the water until chlorine concentrations are below **0.1 parts per million (ppm)** before being discharged. At this point it will be released directly into a soakaway before reaching the brook.

2. Fully emptying the pool in the event of a major maintenance issue

In the event of fully emptying the swimming pool a tanker company who specialise in water removal from swimming pools will be contacted EJ Payne can provide this service, a local based swimming pool company. This water can then be refilled back into the pool. The water itself does not need to be fully removed if maintained correctly.