

Blue Green Algae



WHAT IS BLUE GREEN ALGAE?

Green and blue green algae has been in all waters for millions of years, Algal blooms can occur at any time of the year and in all areas of a body of water but become concentrated in sheltered areas near to the shore. It is most common in non-flowing fresh water such as lakes and ponds during hot weather when there is less rainfall, but can also occur at other times of the year without warning. Algal blooms may appear as a green or blue-green scum on the surface of the water however, can also take on different forms ranging from foam, brown scum and can even look like pea soup.

Algal blooms can produce toxins that may be fatal to dogs and harmful to humans with direct contact and but particularly when ingested. These toxins can cause skin irritation or rashes in humans as well as illness if swallowed.

Symptoms in humans can include skin mucosa and stomach upset. In exceedingly rare cases where quantities are consumed and ingested more severe illness can occur, in this case medical help should be sought immediately.

Owners must keep their dogs clear of the water at all times. If your dog becomes unwell having been in contact with water you are advised to contact your vet without delay.

2019 is the third consecutive year of warm, dry and still spells which has increased the prevalence of algae in all waters across the UK. This spring has seen ideal conditions for blooms to develop and they have been recorded by the estates team in many areas of the reservoir. There is information on the Bewl Water website regarding algae and dog walking advice as well as signs at all entrances to the park ensuring that dog walkers must keep their dogs under control and not allow them to swim in the water.

PROTECTING DOGS FROM BLUE GREEN ALGAE

Although not all Blue Green Algae is dangerous, some can produce toxins that can be harmful, particularly to dogs that may swim in or drink the water containing it. These toxins can damage a dog's liver causing serious illness or even death.

At Bewl Water it is compulsory that dogs are kept under control at all times, not only for their own safety but for the safety of others, therefore as a dog owner it is your responsibility to ensure this happens.

Bewl Water provides plenty of signage to warn that dogs should be kept on leads as well as providing water drinking stations with fresh water around the main areas of the site, there is no need for dogs to be entering the reservoir and if they do it is the owners who are held responsible for this.

HOW DO WE KNOW THE WATER IS SAFE TO ENTER WITH THE UPCOMING OPENING OF THE AQUA PARK?

Before embarking on the Bewl Water Aqua Park project, Bewl Water commissioned an independent water impact assessment by environmental water specialists, South West Environmental Limited. This report details legislative requirement, potential impact, impact descriptions and actions, impact assessment, blue green algae, changing water levels and certification. Both Bewl Water and Southern Water have implemented measures to ensure the public visiting Bewl for land and water based activities, including the Aqua Park, have an enjoyable, and importantly, safe experience.

The devices Bewl Water has invested in create ultrasonic pressure using ultrasound preventing the algae from reaching the surface, thus reducing the concentration of bacteria and blooms. As algae cannot reach the surface, its exposure to light is greatly reduced preventing the algae from photosynthesising and growing further. The effect of these devices is immediate and will continue to be so with superb results witnessed in comparable waters over three years of use.

HOW WILL THE WATER BE TESTED.

Water quality testing is conducted weekly by Southern Water and shared with the Bewl Water Estates Team. This administration will be continued to monitor the water quality in and around the Aqua Park location. An independent water impact assessment has been completed and approved by Southern Water. Should blue green algae be present in the client zone Bewl Water will postpone the Aqua Park activity until it is safe to resume. The Aqua Park will be located some 80 meters from the shore in open water, it is highly unlikely that the algae will be present as it tends to form in quiet, still, sheltered zones close to shore.

Cyanobacteria occur naturally in many in-land, standing bodies of water and can often be seen forming a surface scum or bloom. These bacteria thrive in warm, shallow and nutrient rich lowland waters and examples include Anabaena,

Aphanizomenon, Microcystis and Oscillatoria. Some species produce toxins that can be found in mucus material which is secreted by cells. All staff have received training on the identification of blue green algae blooms. Upon identifying such a bloom the activity area will be closed until an assessment of risks has been made. Samples of the Cyanobacteria will be taken and sent for analysis to determine species and toxicity and allowable levels consulted.

HOW WILL BEWL CONTROL INVASIVE SPECIES IN THE WATER?

Bewl Water are committed to protecting the waters from invasive aquatic species often transferred as larvae, eggs or hatchlings on clothing or equipment that has been used at another water sports location. Aqua Park clients must wear wetsuits and buoyancy aids provided by Bewl Water and will not be permitted to wear their own equipment whilst at Bewl water.

WHO IS AT RISK AND WHAT ARE THE SYMPTOMS?

Human health risk from exposure to blue-green algae toxins can arise through swallowing or inhaling water containing the algae and through prolonged direct contact with exposed parts of the body including the skin, and sensitive areas such as ears, eyes, mouth and throat.

Different groups of water users are at different levels of risk, depending on the amount of time they are likely to spend in/close to the affected water.

Participants in descending order of likely risk are as follows:

1. Swimmers, paddlers, children playing at the water's edge, dogs, other animals including some farm animals, fishermen using the bank and water's edge.
2. Windsurfers whose level of competence puts them at risk in the prevailing wind conditions of becoming immersed in or blowing into areas of algal scum.
3. Dinghy sailors, catamaran sailors, canoeists and windsurfers competent for the prevailing conditions.
4. Other boat users and fishermen fishing from a boat or pontoon.

Essentially the more likely you are to come into direct contact with the algal scum, the greater the risk of effects of exposure. Symptoms of those affected could be easily confused with a range of other illnesses so it is important to be aware of the risk of blue-green algae as a contributory factor.

Swallowing and/or inhalation can result in mouth and nose ulcers, blistering of the lips, abdominal pain, nausea, vomiting, diarrhoea, muscular pains, sore throat, dry cough, headaches, hay fever symptoms, dizziness and fatigue.

Contact with the ears and eyes can result in irritation and exposure of the skin can lead to allergic or irritated reactions such as skin rashes, lesions and blisters.

Bathing suits and wetsuits can aggravate these effects as the cells can accumulate next to the skin and be broken down through agitation, thus releasing the toxins.

Severe cases could include seizures, liver failure, respiratory arrest and even death, although there are no confirmed cases of human deaths from blue-green algae toxins. The severity of the illness is related to the amount of water ingested and the concentrations of the toxins.

WHAT SHOULD YOU DO?

If a blue-green algal bloom appears in your club's or training centre's waters, then following the advice contained within this guidance note will help to minimise the risk to club members, students and participants, and ensure that those choosing to continue sailing understand that they do so at their own risk.

1. Assess and manage the risk
2. Provide information to all users going on or near the water
3. Require Risk Statements to be signed by participants (or on their behalf)
4. Report incidents of blue-green algae blooms and scums to the relevant authority:

England - Environment Agency, 0800 80 70 60

Northern Ireland - Northern Ireland Environment Agency, 0845 302 0008

Scotland - Environmental/Public Health Department at your Local Authority

Wales - Natural Resources Wales, 0800 80 70 60