
Aquatic Habitats and Water on our Public Open Spaces



This paper is part of our Policy series and outlines how we manage water on our sites. Please also heed advice on health & safety regarding water bodies as this is not a safety leaflet! You are responsible for the safety of yourself and those in your care. Please therefore remember that marshes, ponds, streams, canals, rivers, lakes and the sea do present risks, including slippery slopes and wet surfaces, pollution, algal bloom (cyanobacteria toxicity), water-borne diseases, cold & exposure, drowning, quagmires, quicksand and unsafe ground generally.

Water on sites represents one of the richest habitats there are for biodiversity. It is important, vital even, to all amphibians, reptiles such as grass snakes, all fish, many mammals and birds, a myriad of invertebrates, some fungi and many aquatic, emergent and riparian plants. We therefore take the care and management of our water bodies very seriously.

The UK National Vegetation Classification describes some forty wetland and related communities. We have produced a simplified database of these with descriptions and ecological comments. Please ask us if you would like details.

LENTIC AQUATIC HABITAT — PONDS AND LAKES

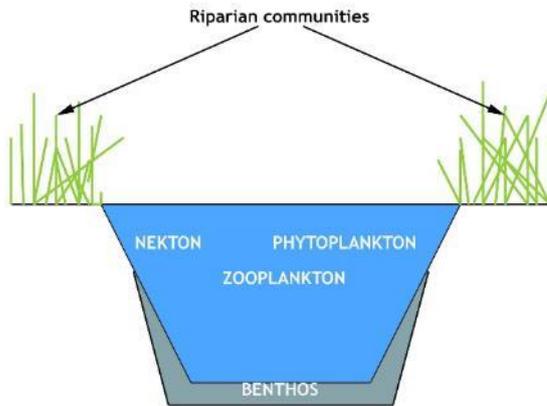
On our sites, ponds are the commonest water features (lakes are really just big ponds with more volume and niches). There has been a steady and worrying loss of ponds in the wider British countryside: over a million in the last century have disappeared, so this makes the ones on our sites more valuable than ever. Some are permanent and others, favoured by amphibians that can breed in them safe from predatory fish, hold water until the summer and then dry out. Most healthy lowland ponds and lakes are mesotrophic (of moderate nutrient status). Our management is tailored to the favourable conservation status (FCS) we want to maintain, so we take action if we see pollution, eutrophication, damage to vegetation of bank structure or excessive disturbance (such as by dogs or irresponsible persons).



Ponds, lakes and other still (lentic) waters¹ also undergo a process known as “hydroseral succession” as vegetation and silt build up, eventually leading to significant loss of the aquatic habitat if unchecked. To keep the desired ecological wetland status, we remove excessive vegetation and silt, usually on a four to six year cycle, to ensure open water is maintained. We always keep plenty of

¹ Even a sunken tub or a rutted cart track can hold interesting and sometimes rare invertebrates and plants, or be an important drinking point for birds and other animals.

vegetation in the water, though, as this encourages biodiversity, and we never use herbicides in or near water. Sometimes invasive species occur, but we use mechanical means of control or encourage natural predators. Do remember that new ponds can take a few years to reach an ecological balance and that algal blooms or excessive growth of other plants such as duckweed can occur until stability is reached as the aquatic ecosystem reaches a balance.



Schematic of a lentic water body with ecological terms for aquatic communities (the nekton is the assemblage of actively swimming organisms in the water body).

Other lentic aquatic habitats on or at the edge of our sites include swales and other SuDS facilities, and canals.

The primary function of Sustainable Drainage Systems (SuDS) is to act as a buffer to surface waters draining from buildings and hard surfaces to mediate the flow and reduce suspended solids and certain pollutants before the water enters the local river catchment. Thus they are often constructed as infiltration beds/swales, balancing ponds, reed or emergent aquatic vegetation beds (hydrobotanic buffers), *etc.* These form important habitats for wetland species and are a boon to biodiversity. Sometimes, though, underground storage tanks are used but they are never recommended by us as they have serious drawbacks in terms of maintenance and the absence of ecological benefits or sustainability. We have many SuDS facilities on our sites and we manage them not only to ensure their efficient drainage function, but also to maximise their wildlife and water-cleaning benefits. Management work is usually limited to the winter when most species are absent or dormant.





Canals, as slow-moving linear water bodies with fixed water levels, are biologically very species-rich and diverse. They often contain species rarely seen elsewhere and are commonly managed and maintained by the Canal and River Trust (see <https://canalrivertrust.org.uk/about-us>) and any management by us, such as of riparian areas, is in line with the Trust’s conservation policies. As linear habitats, they, like streams and rivers, are exceptionally important movement and feeding corridors for wildlife.

LOTIC AQUATIC HABITAT — RIVERS AND STREAMS



Faster flowing or “lotic” aquatic habitats predictably offer a very different environment for wildlife. As always, our concern is with maintaining FCS and controlling adverse impacts such as pollution, excessive disturbance, invasive alien species and litter/fly tipping. We check water quality, often by sampling the aquatic entomology, and manage both the water channel and riparian habitats. A fairly common winter management task is to cut back woody vegetation that is causing excessive shade. In some areas, flooding is a concern, often brought about by constricting natural flood plains, not maintaining drainage correctly or as a result of poorly designed civil engineering works. Flooding is thus usually caused or exacerbated by human activity, and is more distressful to people than it is to wildlife. Some of our riparian grassland sites are allowed to flood regularly as this encourages the special vegetation and wading birds associated with flood meadows and marshy ground. The wildlife corridor function of streams and rivers is vital and we always work to protect and enhance it.

MESIC HABITAT — MARSHY GROUND AND WATER’S EDGE

Some of our most interesting plants and animals are associated with bogs, fens, springs, mires, flushes and permanently moist ground. Although SuDS and stream margin areas do contribute significantly, we do not have enough of these habitats on our land and we actively encourage them. Keeping the water table sufficiently high but not so much that the ecological communities are drowned can be a challenge, so management often has a focus on drainage and water outfalls.



Wet ground can quickly become overgrown with woody species such as alder and willow to form carr, and whilst this can be good habitat if controlled, it is only too easy to lose the open habitats of marshy ground if the ecological succession to woodland is not constrained. Wet ground can be very fragile, so we do sometimes have to restrict access to the public if FCS becomes threatened, though this is not normally for very long. Management operations may involve seasonal mowing, control of invasive plants and winter clearance of scrub.

MARINE, COASTAL AND BRACKISH HABITATS

There is very little coastal and estuarine habitat associated with the kind of land we own and manage that is not already in public ownership or enjoying full public access. Although we have undertaken survey and conservation work along several British estuaries and coastal areas, and continue to do so, these are rarely under our own long-term management.



The ecological management of seashores, maritime cliffs, dunes, salt-marsh, mud-flats and in-shore waters is a specialist ecological topic. If you are interested in these, do please ask us.

A NOTE ON DITCHES

Ditches represent an important class of habitat, rather different from the above because they are a mix of lotic, lentic and mesic types, and are always anthropogenic. Some are very old, being part of an ancient landscape, often in a hedge-lynchet-ditch boundary complex forming landscape corridors and allowing linear movement of wildlife. They may hold water at all times, be almost always dry or have intermediate humidity, and they are frequently flowing because they serve a drainage function. Because of their variability, their habitats are heterogeneous and commonly very biodiverse. Management depends on local characteristics but is based on maintaining ditch function whilst encouraging maximum ecological interest. Clearing them out and arresting any pollution are important management operations. Cleaning or dredging is conducted in such a way and over a defined time frame as to minimise any adverse impact on their ecological communities, for example by limiting work to one side only or along short lengths, allowing these to recover between operations.

The management of aquatic habitats is a huge topic, so please do email us if you have a question of want further information.

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*Professional service
Sustainable land management
Better planning results
Enhanced biodiversity*

Head Office:
Bank House Martley
Worcester WR6 6PB UK
T: +44 (0)1886 888445
E: nature@bettstates.com
W: www.bettstates.com
And local offices