LAND MANAGEMENT TOOLKIT

Local Wildlife Sites – South East Wales Project

The following information outlines the best practice guidelines for managing the habitat type listed below in a manner that is sympathetic to wildlife. It is part of a series relating to various habitat types and management issues that have been produced by your local Wildlife Trusts.

No.10 Ponds & Lakes

What are Ponds and Lakes?

Ponds and lakes are freshwater bodies that can range in size from $1m^2$ to a number of hectares. The smaller examples (up to 2 hectares) are generally called ponds whereas 'Lake' is generally used to describe larger water-bodies. They tend to occur at low points in the immediate landscape where the soil is poor draining. Lakes are usually permanent whereas ponds can be more seasonal, drying out in the Summer.

Common Frog

Broad-bodied Chaser dragonfly

Kingfisher

What wildlife do they support?

Ponds and Lakes are vital for wildlife. They support a varied, specialised and sometimes rare flora which includes duckweeds as well attractive, showy species such as Flowering Rush and water lilies. The fauna is also diverse with important invertebrate communities including spectacular dragonflies. These in turn support amphibians including the protected Great Crested Newt and fish species within the pond, as well as providing great foraging for bats, and birds such as Kingfishers, Reed Buntings and ducks.

Yellow Flag Iris

Flowering Rush

Marsh Marigold

Why preserve/enhance/create them?

Ponds and Lakes are a great resource for wildlife. Sadly recent research shows we have lost almost half a million ponds in the last century and of those remaining "wildlife ponds", 80% are in a 'poor' or 'very poor' condition. It is therefore of great importance that this decline is halted and we would very much like to assist you in achieving this goal by both highlighting the threats to this habitat and providing management recommendations.

Threats

The following can all lead to the loss/degradation of this habitat:

- Infilling due to agriculture or urbanisation.
- Over abstraction or drainage of surface/ground water leading to lowered water levels.
- Eutrophication due to nitrates/phosphate run-off from fertilizer or sewage. This can lead also to toxic blue-green algal blooms.
- Pollution (including mine water sewage and historical dumping). Signs to look out for are scum, films over the water and/or an unpleasant smell.
- Inappropriate management or neglect.
- Changes in surrounding land-use which alters the water table and can cause soil erosion which adds nutrients to the water. For example, ploughing an adjacent field.

Management Recommendations

The following is recommended to ensure the ponds and lakes are managed sympathetically for wildlife and are thus preserved and/or enhanced:

Preservation/Enhancement of Ponds & Lakes

- **Pollution**
  - Run-off from farmland and urban areas can cause excessive nutrient input which is harmful to the health of the pond.
  - Avoid using fertilisers, manures and pesticides close to the water-body.
  - Establish a buffer zone of unfertilised and unsprayed land between the lake/pond and its surroundings. The wider the buffer zone the better and this could consist of tall rank grasses, a hedge or scrub. On agricultural land a buffer of 10-20m is advisable.
  - If the water-body is polluted from an outside source you should try and find out where it is coming from and contact Natural Resources Wales for advice.

- **Managing for wildlife - Fauna**
  - The best ponds for wildlife have gently sloping margins that allow animals to enter and exit easily as well as providing areas of shallow water which are important for the laying of frogspawn.
  - Water levels should be allowed to naturally rise in winter and drop in summer as many plants and animals thrive in this habitat were muddy margins are exposed.
  - Even the occasional (once every few years) fully drying out of the pond is not necessarily a bad thing but efforts should be made to avoid letting the pond dry up permanently.
  - Fish are present and welcome in many ponds and lakes but should not be introduced to a previously fishless water-body as they can disturb the balance and reduce animal and plant diversity.
  - Piles of logs or stones adjacent to a water body will provide shelter, foraging habitat and winter hibernations sites for amphibians.
  - Buffer zones surrounding the pond where vegetation is allowed to grow can make the pond more appealing for wildlife, however efforts should be made to avoid excessive scrubbing over that shades the pond as this will reduce its value for wildlife.

- **Managing for wildlife - Flora**
  - ❖ Fence off banks of water-bodies to prevent loss and damage of marginal vegetation by grazing stock, leaving small areas open for access to drinking water. They should be sited up to 10 metres back from the crest of the bank. (*Please note that if a fence is within a floodplain then land drainage consent will need to be sought from Natural Resources Wales.)*
  - ❖ Encouraging a varied mosaic of marginal and aquatic plants with some open water will be better for a wider range of flora and fauna. Aim for about 5% of the lake/pond area supporting marginal plants, 10-25% supporting floating plants and 25-50% submerged plants.
  - ❖ The flora of the pond can be left to develop naturally, if introducing species to enhance the pond then the following should be noted:
    - i. Avoid introducing non-native plants particularly Canadian Pondweed (*Elodea Canadensis*), Water Fern (*Azolla fillculoides*), Parrot's Feather (*Myriophyllum aquaticum*), Floating Pennywort (*Hydrocotyle ranunculoides*) and Australian Swamp Stonecrop (*Crassula helmsii*). These will quickly take over a water-body, excluding native species.
    - ii. Good native plants for ponds are amongst others Spiked Water-milfoil, Curled Pondweed, Frogbit, Bogbean, Amphibious Bistort, Yellow Flag Iris, Purple Loosestrife, Flowering Rush and Marsh Marigold.
    - iii. Some native plants such as Greater Spearwort, Greater Reedmace, Common Reed and water-lilies should be avoided if the water-body is small as they can rapidly take over.
  - ❖ Some areas of native trees and shrubs around the water body are beneficial to the habitat but need selective removal if they are over-shading the water body. It is better to keep trees on the northern side and remove them on the southern side so as to increase habitat diversity and allow one side to remain warmer.
  - ❖ Regular removal of a build-up of filamentous algae and duckweed can be carried out to reduce nutrients or if it is becoming choked.
  - ❖ If removing silt/vegetation it should be done in Autumn to minimize disturbance to wildlife.
  - ❖ Do not clear more than one third of the area in any one year to avoid wiping out entire plant and animal communities.

Creation of Ponds

Priority should be given to the maintenance and enhancement of existing ponds. Creating new ponds is however a very worthwhile task. Care should be taken to ensure that an already valuable habitat (i.e. species rich grassland) is not lost to the creation of the new pond however. The detail of pond creations works is beyond the scope of this document but your Local Wildlife Trust would be delighted to advise you further.

Should you require any further advice regarding the management of your Local Wildlife Site please do not hesitate to contact your local Wildlife Trust:

Gwent Wildlife Trust
Tel: 01600 740600
e-mail: info@gwentwildlife.org

Wildlife Trust of South & West Wales
Tel: 01656 724100
e-mail: info@welshwildlife.org

Other toolkits available are:
No.1 Neutral Grassland (Hay Meadow)
No.2 Neutral Grassland (Pasture)
N0.3 Acid Grassland
No.4 Calcareous Grassland
No.5 Marshy Grassland
No.6 Marsh Grassland (with Marsh Fritillary)
No.7 Heath
No.8 Hedgerows
No.9 Saltmarsh & Coastal Grazing Marsh
No.11 Scrub control
No.12 Bracken control
No.13 Invasive weed control (natives – thistle, dock etc.)
No.14 Invasive weed control (aliens – Japanese Knotweed, Himalayan Balsam etc.)

Further useful documents include:

- *General Pond information:www.wildlifetrusts.org/wildlife/habitats/ponds*
- *Advice creating and maintaining wildlife ponds: The Wildlife Pond Handbook (Wildlife Trusts)*

This Toolkit has been produced as part of the Local Wildlife Sites – South East Wales Project which is funded by the Welsh Government Resilient Ecosystems Fund 2013-1015