

Pond Design

Considerations for Wildlife and Landscape

Ponds are created for many reasons - sporting activities such as fishing or shooting, general amenity, irrigation, or for wildlife. Whatever the motive, considerations for wildlife habitats and landscape can always be incorporated into the pond design. Read about trees and shrubs, islands, pond outline, plants, wildlife boosters, pond design

Trees and Shrubs

Trees are a valuable asset to any new pond site and can be used to screen undesirable views or carparks and help blend the development into the landscape, such as planting up spoil mounds. They are also great for wildlife, attracting a wide range of birds, mammals and insects if flowering and berry bearing species are used.

Trees should be used in the design of the pond to shelter anglers from prevailing winds, provide choice of secluded and open areas to fish and to create a pleasing environment. There will be certain restrictions to the location of trees to avoid snagging of lines etc. In larger and mature trees, bat boxes to attract bats like pipistrelle and Daubentons, as well as bird boxes for tree sparrows and tits can be introduced.

Trees should be native to Scotland as these will look natural and attract the most wildlife. Choose from a range of native trees and shrubs, including:

- Willows - there are several types of willow available. All are suited to wet ground, fast growing and great for wildlife and fish, as they attract lots of insects, which fall in the water and provide an important food resource
- Alder - also fast growing and suited to wetter areas
- Rowan, Whitebeam, Crab Apple, Gean and Bird Cherry - these all have flowers in spring and berries or fruit in autumn, adding landscape interest as well as food for wildlife
- Birch - this tree likes poorer ground and can look very attractive with its white bark
- Scots Pine - good shelter and evergreen for winter interest
- Oak, Ash, Wych Elm - these trees will grow to very large sizes so should be planted with this in mind
- Hawthorn, Blackthorn, Guelder Rose, Hazel, Elder, Dog Rose - these are shrubby trees, all of which have flowers and fruits which support birds, insects and mammals as well as very attractive
- Holly - evergreen for winter interest, with berries eaten by birds.

When planting trees, make sure they are protected from rabbits or deer. Weeding young trees is vital to their good establishment. You should keep a circle of around 1m in diameter free of weeds or grass for at least 3 years, by using herbicides or mulches.

Grants may be available for larger areas of trees to be planted - check with the Forestry Commission or Farming and Wildlife Advisory Group (FWAG).

Islands

Islands should only be introduced into large ponds. They should be 4 - 5m from the shore and surrounded by deep water. Birds in particular benefit from islands, as they provide safe areas for feeding, roosting and nesting.

High islands can be unsightly. The shoreline of islands should include bays and spits to create sheltered areas. The island should be low with gently sloping edges to allow marginal vegetation to develop as wildlife habitat without the problem of plants restricting fishing opportunities along the shore. Plant some shrubs or trees on the island to provide overhanging branches - these provide shade for fish as well as insects which fall into the water and are favoured by trout.

Pond Outline

The design of the pond shoreline is critical both to wildlife and angling.

Rather than a round, square or oblong outline, go for an undulating shape with spits, peninsulas and bays - this gives more room for anglers as well as wildlife. Dispose of soil well - don't build unnatural-looking mounds which give a 'bomb-crater' appearance.

Allow part of the shoreline to gently slope into the water, shallow water is favoured by many species and allows plants to establish. Use a range of substrate on the shoreline - large boulders can reduce erosion from waves, look attractive and provide nest sites for wagtails. Areas of gravel beach provide a solid surface for visitors, as well as roosting sites for waterfowl.

Allow wetland areas to develop. Boardwalks can be used to cross the area. Water levels don't always end up where planned - allow the pond to fill and settle before adding features like the gravel beach and boulders.

Plants

The wildlife and landscape value of ponds can be greatly and quickly enhanced by the introduction of a range of native pond plants.

Care should be taken in the choice and location of plants as some can be invasive and regular management of these may be required.

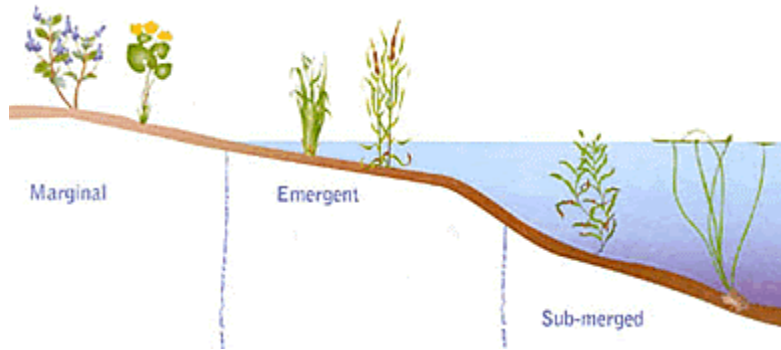
Emergent pond plants are particularly valuable as they help prevent bank erosion wind and waves.

Pond plants support insects, providing food for fish and wildlife.

When introducing plants try to obtain them from a local source such as other ponds or ditches - you must have the landowner's permission to do this. Ensure you are not accidentally introducing invasive species such as Canadian pondweed when obtaining plants - ask FWAG for local sources.

Specialist nurseries supply native pond plants - avoid garden centres as plants are likely to be non-native and can be expensive.

There are 3 zones for aquatic plants: marginal; emergent; submerged



Wildlife Boosters

- Nest boxes
- Bat boxes
- Sand Martin barrels
- Gravel beaches
- Habitat piles
- Rough grassland
- Wetland areas
- Wildflower planting

Pond Design

Do's

- Create a mosaic of habitats
- Design an undulating shoreline for maximum benefit to wildlife and angling space
- Incorporate some shallow water areas with dense plant cover to provide a sanctuary for invertebrates and amphibians
- Make sure you take into account overhead powerlines - especially where there may be conflict with trees or fishing lines.

Don'ts

- Create a pond where it will destroy or adversely affect other wildlife habitats
- Choose a site where run-off from roads and car parks can enter the pond
- Introduce non-natural substances, such as 'reefs' made from old tyres
- Fertilise or neutralise the water
- Create an on-stream pond - this leads to siltation and disrupts fish movement. Always create an off-stream inlet

- Site a pond where there may be a problem with contaminated water from tributaries

Contacts

Grampian Farming and Wildlife Advisory Group (FWAG) -

Advice on a range of topics including the management and creation of wildlife and landscape features such as ponds and woodlands, watercourses, as well as advising on potential grant schemes.

Tel. 01330 830080

e-mail: grampian@fwag.org.uk

<http://www.fwag.org.uk/>

Scottish Natural Heritage (SNH) -

Advice on site designations and protected species.

Tel. 01224 642863

<http://www.snh.org.uk/>

Scottish Environment Protection Agency (SEPA) -

The statutory agency protecting Scotland's land, air and water.

Tel. 01224 248338

<http://www.sepa.org.uk/>

Freshwater Fisheries Laboratory -

The only government research laboratory in Great Britain wholly devoted to freshwater fisheries.

Tel. 01796475060

<http://www.marlab.ac.uk/>

Scottish Executive Rural Affairs Division (Fisheries Group) -

Administers Scottish Fishery legislation, particularly with regard to migratory fish.

Contact local SERAD off for further info.

Tel. 01467 626222

<http://www.scotland.gov.uk/WebPages/default.aspx?404>; http://www.scotland.gov.uk/who/agencies_fisheries.asp

Aberdeenshire Council -

Planning - Advice on planning regulations and guidelines.

Tel. 01224 664342

<http://www.aberdeenshire.gov.uk/planning/index.asp>

Scottish Water

Information on drinking and waste water.

Tel. 0345 437437

<http://www.scottishwater.co.uk>