

# Making a wildlife pond

GWF479  
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**As ponds disappear from the countryside, you can help provide new habitats for a wide range of wildlife by creating a suitable pond in your garden.**

Your own wildlife pond can provide a much-needed haven for frogs, toads, newts, dragonflies and other aquatic wildlife, a place for birds to drink and bathe, and a habitat for attractive native plants.

## 1 Choosing a site

A level piece of ground in a sheltered position, which is in sun for at least two-thirds of the day, is best. Avoid areas under trees, or ground that may become waterlogged. At this stage you should also decide how you are going to design the edges of the pond so that the lining is not visible (see Step 9).

## 2 Size and shape

The larger the pond, the more possibilities there are for planting, and for the creation of different habitats. An irregular shape looks more natural, but keep curves gentle or the liner will be difficult to fit. Part of the pond should be at least 60cm deep, so that some water will always remain unfrozen for aquatic life and hibernating frogs. Deep water also remains cool, and holds more oxygen in hot weather. Gently sloping sides are best, to provide good access and lots of shallow water, which amphibians prefer. All this means that for a well-balanced wildlife pond, you should aim for a water surface of 10sq m, larger if

possible. However, a smaller pond is still worth building, even a pond in a container can provide a home for a few wild flowers, a frog or two, and a range of interesting insects and other small creatures.

## 3 Marking out and levelling

Mark the shape of your pond with pegs and a rope or with hosepipe held by pieces of bent wire. View from various angles and adjust the shape until you are happy with it. Use pegs, straight boards and a spirit level to produce a level area, before you start excavating.

## 4 Removing the soil

First decide what you are going to do with it afterwards. Taking it away altogether is simplest, but may prove expensive if you have to pay landfill charges. Local advertising may reveal someone who wants the soil, but do not underestimate the problems of transport. You may have room for it within your own garden, in which case you should keep the turf, topsoil and subsoil separate. You could stack the turf upside down to rot down into loam to use in compost for container plants. The topsoil could be used for raised beds or levelling another area of the garden. The subsoil is less useful, but could make a sheltering bank suitable for wild flowers - topsoil is usually too rich for these. You can dig out the pond by hand, or hire a mini-

digger if there is access. Dig out the pond 5cm deeper than required to allow for the liner and padding. Also, remove a strip of turf or 5cm deep layer of soil for 30cm around the outside of the pond. Check the area is still level.

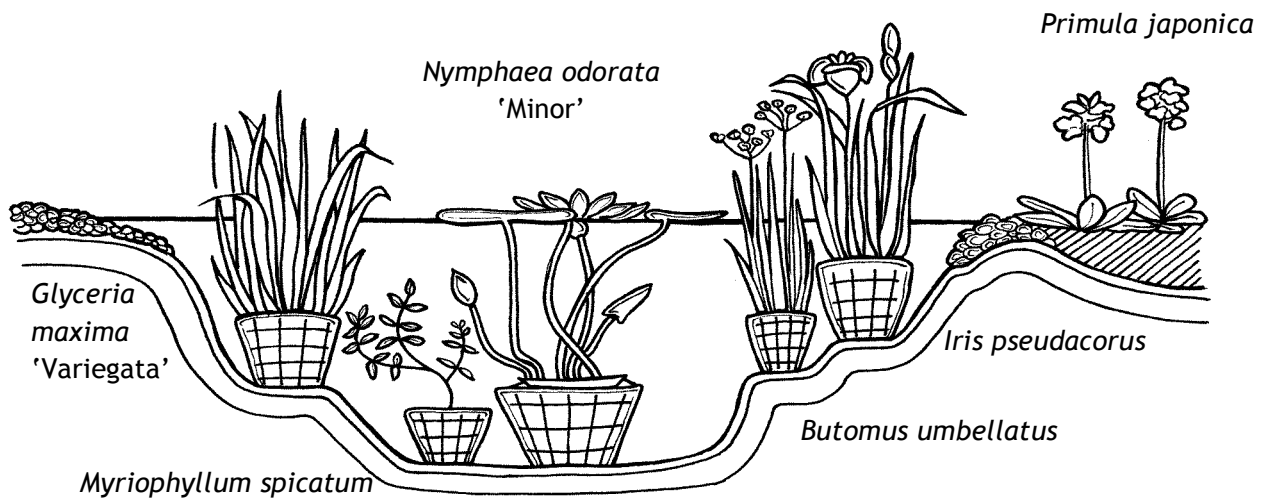
## 5 Choosing a liner

Butyl rubber is by far the best material. Puddled clay has the virtue of being natural, but is difficult to handle, and even more difficult to make watertight. Concrete is not really suitable for an irregular, natural-looking pond, as it can be difficult to install and prone to cracking. Preformed rigid liners are generally much too small, and have steep sides. Plastic lining materials including polythene and PVC are not as strong or as long-lasting as butyl. Butyl rubber liners are available from pond equipment suppliers, or direct from the manufacturers who advertise in specialist magazines.

## 6 Calculating liner size

Liners can be supplied in any dimensions you want, and are priced by the square metre. Measure the maximum length, width and depth of the hole, then calculate the dimensions of the liner you need to buy as follows:  
**Liner width = 2 x depth + pond width + 30cm**  
**Liner length = 2 x depth + pond length + 30cm**

## Cross-section of a wildlife pond



### 7 Protecting the liner

Remove any stones or other sharp objects from the bottom and sides of the hole, and cover with a 2cm layer of sand, old carpet, wet cardboard or newspaper. Alternatively, you can buy commercial liner protectors which cost about a third of the price of butyl liners.

### 8 Fitting the liner

Carefully open out the liner and ease it into the pond. Make sure it overlaps well on all sides, and weigh the edges down with stones. Try not to walk on the liner, which can cause punctures. Gradually fill the pond with tap water. Rainwater is best for topping up ponds as it contains fewer dissolved nutrients, but it is rarely practical to collect enough in advance to completely fill a pond. As the pond fills, continue to ease in the liner, pleating to fit where necessary.

### 9 Disguising the liner

Once the pond is full, trim off excess liner and secure the edges by burying. Areas of liner between the bank and the water

are very unsightly and need to be hidden. Shallow slopes can be covered with turf, soil, gravel or pebbles. If necessary, position a retaining barrier of larger stones at the base of the slope. Steep sides can be hidden by planting both in the pool and on the bank, or with paving or decking which overhangs the margin.

### 10 Stocking the pond

Once the pond has filled, leave it for a few days to settle, and for chlorine to evaporate, before planting. Choose mostly British native plants, as these are best for wildlife. (For a list of suitable plants ask for GWF480 'Plants for wildlife ponds'.) Putting your pond plants in special aquatic baskets is better than adding a layer of soil all over the bottom of pond. Too much soil creates an excess of nutrients, which can encourage algae. Plants in baskets are also much easier to control - most native plants have a tendency to be somewhat invasive. Within the pond you need a mixture of plants at different levels. Oxygenators such as *Myriophyllum spicatum* are

mostly submerged; floaters like water lilies are generally anchored on the bottom, but carry their leaves and flowers on or just above the surface. Native water lilies tend to be too large and vigorous for most garden ponds, so cultivated varieties are preferable. Marginal plants such as irises have their roots under water but their flowers and foliage above it.

Beside the pond you can construct a bog area for water-loving plants by extending the liner beyond a water-retaining ridge (see cross-section above). Shrubs and other ornamental plants can provide valuable cover and food for wildlife, especially for birds. Keep taller plants to the north side to avoid shading the pond.

A lot of wildlife will arrive at your pond by itself, but you can kick-start the process by adding a bucket of water and silt from an established pond. Fish are not appropriate in wildlife ponds and it is best not to introduce amphibians artificially - if the pond is suitable, they will find it.