

# 14 Creating a pond

Ponds have been disappearing at an alarming rate over the last 100 years, yet creating a wildlife pond is one of the easiest things you can do for nature and you can see the results in a matter of weeks. A wildlife pond will give you hours of pleasure as you watch dragonflies darting, birds bathing and frogs blinking up at you!



## Siting the pond

- 1 Make sure your pond will not destroy something that is already good for wildlife such as an old wildflower meadow.
- 2 Avoid shade - a sunny, sheltered spot is best. Sun should reach the pond most of the day.
- 3 Avoid overhanging trees - rotting leaves will reduce the amount of oxygen in the pond and spell death for water-life.
- 4 Locate your pond near to a water supply so that it can be kept topped up in dry weather. Ponds near rivers may require permission from the Environment Agency.
- 5 Dig your pond well away from services such as underground gas and electricity lines. Get advice from your local authority.
- 6 A dipping platform incorporated in to the design creates a great spot to explore the wildlife living in the pond, access (including disabled) will be needed.
- 7 Remember the hazards associated with ponds and deep water, you may want to build a fence around it, especially if the pond is in a school ground or community space.

## Pond design and excavation

Once you have decided where to put your pond, you should mark out a suitable shape with canes or string. Ponds can be dug at most times of year, but a pond started in spring will develop the fastest.

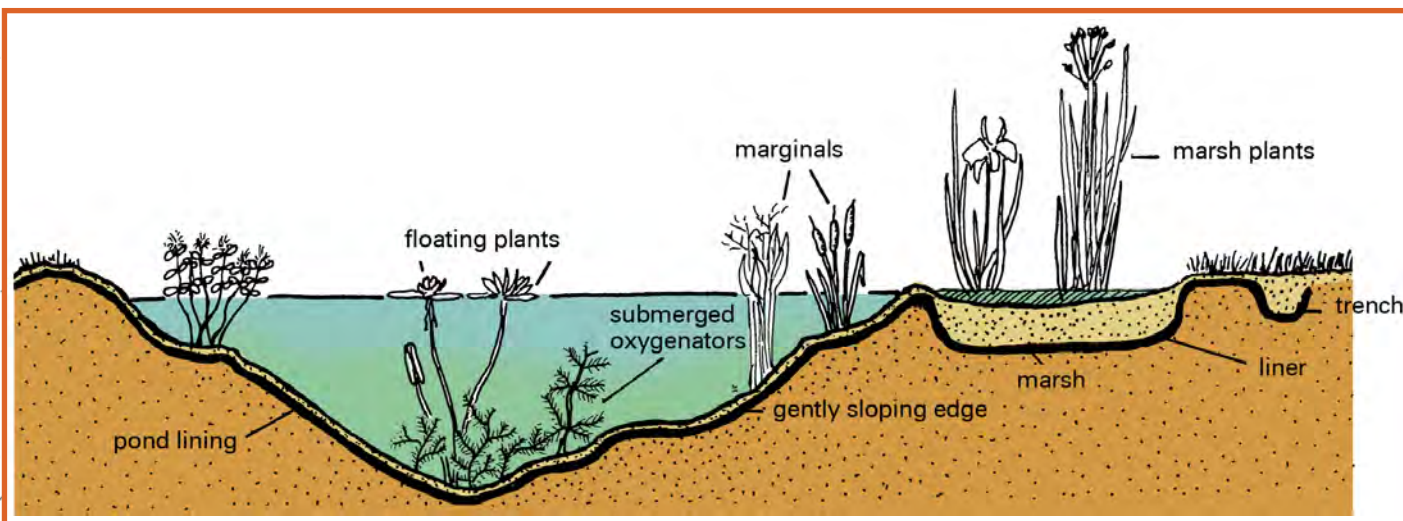
Try to make your pond as large as possible, it will be richer in wildlife and easier to maintain in a balanced state. 6x8 metres is a good size. It should be at least 0.75 metres deep in the centre to stop it freezing in winter.

A good design is a saucer shape with gently sloping edges (so that animals can get in and out) and an irregular shoreline with 'bays' to provide secluded areas for wildlife. Shelves and ledges add variation in depth.

Before you start to dig, decide what you are going to do with all that soil. It could be used as a wildflower bank or a nettle bed for butterflies.

When you start to dig, strip the turf to keep for edging the pond later. Dig the hole 15-20cm deeper than the design to allow for the liner and a protective layer. Also, dig a trench around the edge of the pond so you can bury the edges of the liner at the end. It is vital to check that the lip of the pond is level all the way round.

For a very large pond, get professional advice, as it can involve complicated engineering works.



Cross section of a pond

## Lining the pond

The easiest way to line a small to medium sized pond is to use a flexible liner. For large ponds clay is best - see 'Want to Know More' (WAP10) for this and other methods.

There are three main types of flexible liner: polythene, PVC and butyl rubber. The best is butyl rubber, which is hard to puncture, more flexible and will last much longer - 50 years or more!

### Work out the size of the liner you will need

**LENGTH** = Greatest length of finished pool  
+ twice maximum depth

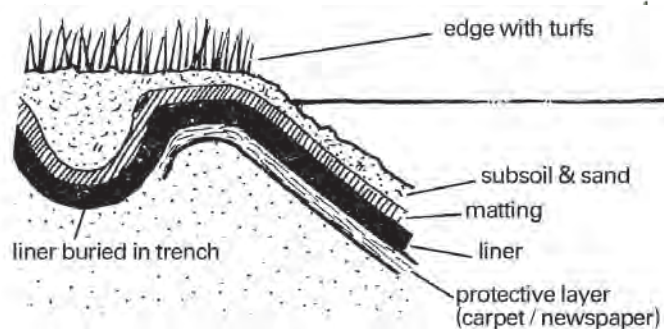
**WIDTH** = Greatest width of finished pool  
+ twice maximum depth.

## How to line your pond

- 1 Compact the soil and remove large stones.
- 2 Cover the hole with a protective layer of old carpet or newspaper (15cm thick).
- 3 Place the liner over the hole and position it centrally. It should sink into position.



- 4 Cover the liner with polyester matting. This will give your liner protection from sunlight, wear and tear and provide a rough surface for soil to cling to (matting is available from suppliers).
- 5 Carefully place a thin layer of subsoil mixed with washed sand over the matting (Top soil is too rich for pond life). Make sure there are no sharp objects.

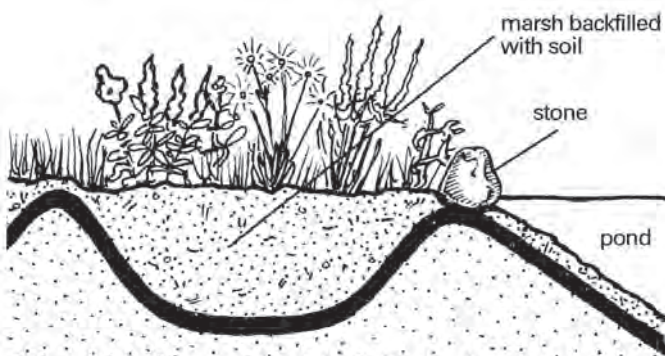


- 6 Fill the pond with water. Tap water is often the most practical, but rainwater is ideal if available.

- 7 When full, secure the liner in the trench with soil. Trim the liner and edge with turf.

## Creating a marsh

Creating a marsh can add variety to your pond. Extend your liner over a shelf at the edge and fill with soil. The shelf should fall just below the water level to allow water into the marsh, but be high enough to prevent it from becoming part of the pond. You can use stones to prevent soil slipping into the pond.



*Cross section of a marsh*

## Planting

Leave your pond at least a week for the soil to settle before planting. Plant between April and September



if possible. Free plants can be obtained from pond owners thinning out their ponds in the autumn. Never take plants from the wild and try to use plants local to your area. Local suppliers may help.

You can plant into the layer of soil you have provided, or put plants on the ledges in perforated pots.

- Planting in pots controls the growth of vigorous plants such as water-lilies.

### Submerged plants: plant in deep water

- Hornwort - *Ceratophyllum demersum*
- Water crowfoot - *Ranunculus aquatilis* (below)



- Common water starwort - *Callitriche stagnalis*
  - Spiked water-milfoil - *Myriophyllum spicatum*
- (Avoid Canadian pondweed: it will take over!)

### Marshplants: plant in the marsh or on the edge



- Meadowsweet - *Filipendula ulmaria*
- Purple loosestrife - *Lythrum salicaria* (left)
- Lady's smock - *Cardamine pratensis*
- Gipsywort - *Lycopus europaeus*
- Ragged robin - *Lychnis flos-cuculi*

- Marsh marigold - *Caltha palustris*
- Rushes and sedges - *Juncus & Carex*

### Floating plants: plant in deep water

- White water lily - *Nymphaea alba* (below)



- Yellow water lily - *Nuphar lutea*
  - Broad-leaved pondweed - *Potamogeton natans*
- (Best avoided in small ponds)

### Emergent plants: plant in the shallows



- Water forget-me-not - *Myosotis palustris*
- Water mint - *Mentha aquatica* (left)
- Yellow flag - *Iris pseudacorus*
- Water plantain - *Plantago alisma-aquatica*
- Flowering rush - *Butomus umbellatus*

Different water plants require different depths of water, so choose a selection of different types. In small ponds, avoid tall plants such as reeds and reedmace.

### Introducing animals to the pond

Animals will often arrive without your help, especially if there are other ponds nearby. If there are not many local ponds, you could introduce frog or toad spawn from a garden pond. Check that the pond does not contain the invasive plant, New Zealand stonecrop, or is affected by frog diseases. One or two clumps is enough for a garden pond. Remember — never take animals or spawn from wild ponds.

Do not introduce fish to your pond as they will eat tadpoles and other wildlife.

### Care of the pond

Ponds need care to keep their interest. See the 'Pond Management' project (WAP15).