



3. SAMPLE MANAGEMENT PLAN November 2011

This document outlines some activities pond-owners will need to ensure are undertaken, to keep the pond in good working order (for pupils and teachers to use throughout the year).

This sample management plan is based on a 3m x 3m pond, with nearby overhanging trees.

i. Autumn

a. Net over pond

- i. The pond is surrounded by trees of varying heights, one of which produces fruit. The more leaves that fall into the pond, the faster it ages, meaning that another clear-out will be required sooner. Also this leads to more 'free nutrients' in the water, which can cause accelerated growth of pondweeds (blanketweed and duckweed). You can slow this process down by reducing the amount of leaves that fall into the pond. Netting the pond is a good idea.
- ii. Netting should ideally be less than 1cm mesh, and will need to be shaken clear every two weeks or so. This is to stop the nutrients from the decaying leaves leaching out with rain, and entering the pond.

ii. Winter

a. Remove netting

- i. You should be ok to remove the netting once the leaves have come off the trees (late December).
- ii. When the water is clear you might notice some frogs lying motionless on the bottom of the pond. These are hibernating males. The less the pond is interfered during this period the better.

iii. Spring

a. Frogspawn

- i. This is a good time for classes to visit the pond to look at the displaying frogs, and the frogspawn being laid. I

suspect that the pond supports a population of at least ten (likely more) breeding adult frogs. If you wanted to carefully tease some frogspawn out of the mass of frogspawn (to put into an aquarium), then the best time to do this is when it has been freshly laid (when the jelly has the dots in). Most years the spawn is laid in the last week of March in the northern half of England. Development will take between 12 and 16 weeks.

- ii. In some new ponds the frogspawn can take a while to develop from tadpoles into frogs. This is because there are fewer nutrients in new ponds. If you notice there are still tadpoles in the pond in early August you could add a few fish flakes each day (available from garden centre up the road).

b. Planting [GARDENING CLUB ACTIVITIES]

- i. **Submerged plants:** The pond will need plants adding to it. These plants will absorb the 'free nutrients' in the water, reducing the growth rate of problem pondweeds, and they will also oxygenate the water.
- ii. **Barrier planting:** The near side of the pond (gravelled shore) will need a shrub or two being planted. This will reduce 'wear and tear' of this area through footfall, which can lead to exposing the liner (which increases likelihood of puncture. Low-growing ivy will complement the shrub planting.
- iii. **Problem plants (and thinning out):** In the early years in particular the pond is likely to have 'blooms' of duckweed and blanketweed. The more of this you can remove the better. It will grow back (almost as fast as it seems to be removed) but each lot removed represents 'free nutrients' that cannot be re-used. As 'proper' pond plants become established, these will absorb the free nutrients so that the problem plants can't use them. Removed pond weed should be left in a pile by the pond for 24 hours (so that pond creatures can drip back into the water), then composted.

c. Pond-dipping

- i. **Timings:** Pond-dipping can occur throughout the year, but will get best results between late-April and late-October – going from late April gives time for the tadpoles to put on a bit of bulk (making them easier and hardier subjects for study!). The pond should have maximum creatures in it during June and July, when adults and larvae of insects exist in the pond together.
- ii. **Accessing the pond:** If possible, limit the number of pupils pond-dipping at a time to groups of two or three.

This means that creatures in the pond won't get too stressed, and also means that the pond edges won't become too worn by footfall. Use the pond-dipping platform whenever possible.

- iii. **Pond-dipping platform:** The platform should be hard wearing, but you can enhance the length of its life by painting on some wood varnish each year. A thin layer will do, and ensure that no varnish drips into the water (or off a paintbrush). Also do it when you know it is definitely not likely to rain while the varnish is drying. (Varnish is harmful to the pond inhabitants!).

iv. Summer

a. Cut back overhanging leaves

- i. Now is a good time to saw off the accessible overhanging branches, that are likely to drop leaves into the pond in autumn. Also, the more light that hits the pond the better – you could consider cutting back overhanging branches that are shading out the pond.

b. Be wary of mowing lawn when grass is damp

- i. In July, you are likely to notice many froglets radiating out across the grass to find good habitats on land. Most will remain in the wildlife area, but some will move across the lawn. Most migrations take place when the grass has recently been rained on, so be wary (if possible) when cutting the surrounding lawn area should these weather conditions occur.

c. Consider installing a solar pump to oxygenate water

- i. Many of the pond plants will oxygenate the water, though on particularly hot days the oxygen content of the water is likely to be reduced (because warm water holds less oxygen). You could consider adding two or three simple solar panel pumps. I use [Bradshaws Solar Oxygenator](#), [Solar Air Pump](#) which seem to do the job quite well. Each pump costs £30.00.

Further details

If you have any further questions please do make contact at any point!
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