



HOW TO CREATE & MANAGE A POND FOR WILDLIFE!

Top Tips and Key Considerations

- 1. First 'do no harm':** Do not create a pond in a Special Area of Conservation (SAC), Special Protection Area (SPA), Natural Heritage Area (NHA) or similar, without permission from the National Parks and Wildlife Services (NPWS). When you are choosing the location of your pond be sure that you are not removing or altering a good habitat that is already in existence e.g. does the existing area contain plants with different shaped leaves or flowers compared to the rest of your land? If yes, leave it be and choose somewhere else for your pond.
- 2. Choose a sunny spot for your pond without overhanging vegetation.** Somewhere with roughly 10% shade at a maximum is good.
- 3. Work with what nature provides to you.** If you have a naturally occurring damp area on your land this could be a good location for your pond.
- 4. Consider whether you have any existing wildlife corridors** e.g. hedgerow, tree line, wildflower meadow, drystone wall, riparian (land adjacent to rivers or streams) zone, that you could place your pond adjacent to. This will help wildlife arrive at your pond and move safely through the landscape.
- 5. Check if your soil is free-draining,** or if it is likely to hold water. If your soil is very heavy clay or marl (lime-rich clay), then you can create a pond without the need for a liner. Tamping down the soil will also help to keep it watertight. The best way to find out if your soil will hold water is to dig one or more trial pits.
- 6. There are lots of different types of pond liner,** but the most common ones are EDPM (Ethylene Propylene Diene Terpolymer) and butyl rubber which are each a form of synthetic rubber, and...

...PVC (Polyvinyl Chloride) which is a plastic. Bentonite is a natural clay-based liner, but it can be tricky to work with. Shop around to see what liner is most suitable for your pond/budget.

- 7. Use this formula to calculate the amount of pond liner you need,** including 0.3m extra to allow for slack in the liner when it is laid: $(\text{Length} + 2(\text{Depths}) + 0.3\text{m}) \text{ BY } (\text{Width} + 2(\text{Depths}) + 0.3\text{m}) = \text{Total}$. For example, for a pond with the following dimensions 15m Length, 10m Width, 0.5m Depth: $(15 + 2(0.5) + 0.3) \text{ BY } (10 + 2(0.5) + 0.3) = 16.3\text{m BY } 11.3\text{m} = 184\text{m}^2$
- 8. Use this same calculation for your underlay.** The underlay is typically a strong synthetic fabric layer which provides a cushioned surface that helps prevent sharp items, like rocks, from puncturing the liner.
- 9. Size:** a pond can be any size between 1m² up to 2 hectares (2.5 football pitches). If you don't have much space, one or more small ponds (even container ponds e.g. Belfast sinks) can be great for wildlife. Let your imagination go wild!
- 10. If installing a pre-moulded pond,** turn it upside down and mark the perimeter, this will help with making sure your hole is the right size. Builders sand can also be helpful to map out which part of the hole needs to be dug out for the shelves and the bottom.
- 11. Best practice is to re-use everything on-site.** Your topsoil can be moved to an area where you can re-use later e.g. in flower beds, planters, while rocks and wood can be used to help create microhabitats e.g. rock piles, deadwood piles, for your garden wildlife. Nutrient poor subsoil can be placed over your liner to give plants a substrate to root into. Do not add nutrient rich...

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...topsoil, as this can cause algal blooms and deplete your pond of oxygen. Childrens play sand and/or clean pea gravel can also be used as a substrate.

- 12. It is best to let your pond fill with rainwater,** or to add rainwater from a water butt or roof downpipe, however if filling your pond with a bucket or other container, make sure and try and limit splashing and disturbing the substrate.
- 13. Your pond should have a shallow gradient at the edges with some deeper sections.** Also make sure to add undulations (these can act as great microhabitats for pond critters and aquatic plants!). Most aquatic animals and plants live within the first 0-30cm of the pond.
- 14. Depth:** the Irish planning and development regulations (as amended) outline that when constructing any path, drain or pond or upon carrying out any landscaping works within the curtilage of the house the level of the ground shall not be altered by more than 1 metre above or below the level of the adjoining ground. This means that ponds > 1 metre in depth require planning permission.
- 15. Health and safety:** water safety is extremely important, particularly where young children or vulnerable adults are present. Education therefore plays a vital role concerning raising awareness of the dangers that can be found around wildlife ponds (water of variable depths, vegetation-covered water, hidden rocks and objects, dirty water etc.). We don't fence off the sea, instead we teach our children how to be safe by the seaside and make sure to always accompany young children and vulnerable adults. To enhance health and safety protections around ponds, fencing can be a good option...

- ...the pond for 48 hours so that any aquatic animals hiding in the plant matter can return to the pond. After 48 hours you can use this cleared vegetation as compost for your garden. However, if you know or suspect that a dominant pond plant is an invasive species follow the 'Be Plant Wise' guidance here: www.invasives.ie/biosecurity/be-plant-wise/. Encroaching surrounding trees can be trimmed back or in the case of species such as willow or hazel they can be coppiced or pollarded to prevent the pond from becoming over-shaded.
- 20. Do not introduce fish,** particularly non-native or invasive fish, into your wildlife pond as they will predate on amphibian tadpoles, aquatic invertebrates and aquatic plants.
 - 21. Use a natural pesticide-free approach to gardening to ensure greater presence of wildlife in your garden,** this will also reduce run-off of pollutants into your pond.
 - 22. Ponds for climate action:** long standing ponds with natural vegetation are the most effective for climate action. This is due to their ability to capture and store carbon from the atmosphere. Managing your pond to...

- ...incorporate different border edges, e.g. tree lines, native wild flower grassland, can help maximise carbon storage potential.
- 23. When pond dipping always follow the 'Check-Clean-Dry' approach** when moving equipment, e.g. pond nets, wellies, between water bodies, you don't want to unintentionally move around any nasty hitch hikers! (www.invasives.ie/biosecurity/check-clean-dry/).
 - 24. Spend some time thinking about the future management of the pond** – will there be someone to keep an eye on litter and/or the encroachment of invasive species, for example? If possible, develop a 5-year management plan stating who will care for the pond once developed.
 - 25. After all your hard work sit back and enjoy your wonderful wildlife pond.** Keep an eye out for wildlife as it arrives. You can record the species that live in or visit your pond via www.biodiversity.ie
 - 26. More information on pond creation and management for wildlife and relevant links to this topic can be found using our QR code.**



Contacts and Further Information: An Taisce: An environmental charity with a focus on conserving Ireland's built and natural heritage – www.antaisce.org

Legacy4LIFE: An Taisce's project focusing on Ponds for Biodiversity, Advancing Farm-to-Fork, and Green Communities: development of a low-carbon town plan – www.antaisce.org/legacy4life

Ponds for Biodiversity: One of the three strands of An Taisce's Legacy4LIFE project focusing on the importance of ponds for wildlife and climate change mitigation – www.antaisce.org/ponds



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19. Pond management: if you feel that some of your pond plants are over-dominating you can manage these using the 'rule of thirds', only remove one third of the vegetation/particular plant species at a time, that way aquatic animals always have somewhere safe to shelter. After removing vegetation leave it on the banks of...