

Planting near watercourses

ADVISORY NOTE



Water-crowfoot

Peter Creed

This Advisory Note aims to encourage good practice when landowners and land managers are planning to plant near or in rivers, streams and ditches, and ponds that are not in gardens.

It applies to all sorts of plants, whether trees, shrubs, wild flowers, ferns, marginal plants or 'true' aquatics which grow in water all through the year.

Wild plants and river banks

Wild plants are very important along river banks:

- ✿ Their roots hold banks in place and prevent soil washing away, especially during flood events.
- ✿ They provide food and shelter for wildlife, including fish, insects such as damselflies and water beetles, and threatened mammals including otter and water vole.
- ✿ They often form locally distinctive plant communities of wild flowers, sedges, rushes and grasses.

The character of individual watercourses can be very different. Catchment geology, water chemistry, biology, flow, management, bank profile and land use are all important factors that will determine which wild plants and animals occur in the water and along the water margins.

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To plant or not to plant

Wild plants will usually colonise water margins of their own accord if the conditions are suitable. There are many successful river restoration projects where wild plants have returned after excluding grazing livestock by fencing, or where environmentally-friendly bank profiles have been created.

Within rivers themselves, simple works such as placing wooden stakes to deflect flow on over-widened watercourses can create conditions suitable for plants to re-establish. The local Environment Agency¹ ecologist can provide advice based on experience from other projects and will advise on whether planting is either necessary or desirable and, if so, what species can be established. Case studies can also be found on the River Restoration Centre's website.

Some wild plants associated with rivers and water margins:

- ☼ **Common reed** (water edge/shallow water)
- ☼ **Branched bur-reed** (water margins)
- ☼ **Purple-loosestrife** (shallow margins that dry out in summer)
- ☼ **Water-crowfoot** an aquatic plant of fast-flowing clean rivers
- ☼ **Valerian** (muddy margins exposed in summer).

Remember – these plants will not be suitable for every location.



Photos: Peter Creed

Purple-loosestrife



Common reed



Valerian



Branched bur-reed

1. The Scottish Environment Protection Authority (SEPA) in Scotland.

Obtaining wetland and aquatic plants

If it is essential to introduce plants: first consider obtaining plants from natural watercourses in the local areas; for example, where there is a surfeit of plants or where cuttings can be taken without harming existing plant or animal life. Surplus plants may be available after routine ditch or pond dredging. Permission from the landowner or farm tenant will be required.

Many riverbank and aquatic species can be propagated vegetatively or grown very easily from seed. For large projects, consider approaching a specialist grower of British wild plants (see *Flora locale's* website) to contract-collect material and propagate this for you.

Always find out first which wild plants grow in similar habitats in the



Wild plants have arrived of their own accord in this pond, which is less than 10 years old.

locality. With this knowledge, select suitable species for your project.

Pond and river plants from general aquarists and garden centres are often garden varieties. They are suitable for gardens but not for establishing in the wild. If there is no alternative but to purchase plants, it is recommended to use a specialist grower of British wild plants. Always

ask for details of origin (the wild location of the original stock used for propagation).

Before planting always wash soil off roots away from drains, ponds and watercourses. This will reduce the risk of introducing unwanted 'hitch-hikers', whether other plants or invertebrates such as exotic flatworms or snails.

Garden plants and introduced species

Please do not introduce garden plants, especially varieties of aquatic plants or those associated with water margins. Less visible 'invaders' can also be unwittingly introduced, such as non-native insects and other invertebrates, which may be present in soil on the roots of purchased plants. These may create risks to our native wildlife in the future.

Some introduced species that are now common in ponds and streams:
Least duckweed,
Water fern,
Orange balsam,
New Zealand stonecrop,
Himalayan balsam, bladder snails (*Physa* spp.), the water shrimp *Crangonyx pseudogracilis*, introduced flatworms.

In many cases the introduced species occur in greater numbers or quantity than the wild plants and animals which should occur.

Buddleija has smothered bankside wild flora on the Kennet and Avon Canal near Newbury, Berkshire.



Permission and licences

Any works between eight and ten metres² of a main river (including bank reinforcement, tree planting and any other planting) require permission from the Environment Agency, (in Scotland from the Scottish Environment Protection Agency). Similarly, a consent from the Agency will normally be required to divert any part of a watercourse, and a licence to take water from one (e.g. to make a garden feature). Some rivers and streams are also designated as Sites of Special Scientific Interest. In these areas, permission to carry out any work will need to be obtained from the relevant government agency³. These safeguards are in place because there could be implications for flooding, river levels or other impacts on existing habitats or wildlife.

Japanese knotweed

Advice from the Environment Agency should be sought prior to removing Japanese knotweed, which can reproduce through small severed fragments; the waste and the soil it is growing in are classed as controlled waste and it can only be taken off site for disposal to a licensed site capable of receiving it. Soil from unknown sources, and builders' waste, has helped to introduce and assist the spread of this plant, which can be almost impossible to eradicate once it has established on a river bank.

Owning a river

Anyone owning land crossed or adjacent to a river or other watercourse is usually a 'riparian owner', who is responsible for maintaining it. It is usually the case that riparian owners own half of the river on the same side as the rest of their property. To find out more see the Environment Agency leaflet 'Living on the Edge' or the website.

2. This varies between different regions.

3. Natural England, Countryside Council for Wales, Scottish Natural Heritage, Environment and Heritage Service Northern Ireland.

Further information

- ✿ www.therrc.co.uk
the River Restoration Centre. For case studies and technical information on river restoration methods.
- ✿ www.floralocale.org
Advisory notes: Buying native flora, Reed propagation; list of suppliers of British and Irish wild flora.
- ✿ **River plants: the macrophytic vegetation of watercourses.** (Second edition)
Sylvia Haslam. Pub. University of Cambridge. £25.
- ✿ **Laminated illustrated guide to commoner water plants**
FSC publications. £3.25 from www.field-studies-council.org (tel: 0845 3454071).
- ✿ www.plantlife.org.uk/PlantInvaders/index.asp
Help Plantlife's survey of invasive plants and learn more about them, including control methods.
- ✿ **Environment Agency (EA) and Scottish Environment Protection Agency (SEPA)**
please see your local telephone directory or www.environment-agency.gov.uk and www.sepa.org.uk
- ✿ www.pondstrust.org.uk:
Factsheets on creating and planting ponds from The Ponds Conservation Trust.

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For further advisory notes, case studies, Guidelines for planting projects in the countryside, training opportunities and suppliers of native flora, go to www.floralocale.org



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