

## **DITCHES**

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### **CURRENT STATUS**

Ditches are defined as narrow channels dug to hold or carry water and are normally created for drainage to take water away from low lying areas, to help to drain water alongside roads or fields, or to channel water from a more distant source for crop irrigation. A long narrow ditch can be defined as a trench. Ditches occur throughout the county and in some places such as the carrlands in the north, ditches replace hedgerows as field separators. Ditches differ from natural streams and rivers by having a relatively slow water flow and usually a uniform profile, with a variety of widths and depths, but many are heavily managed for drainage whilst a fair percentage are poorly maintained and are dry for a large part of the year.

The wildlife value of ditches derives in part from providing a historic continuity for the entire waterway corridor, which includes the open water zone and field margins. The water channel provides a habitat for aquatic and emergent plants, and associated invertebrates, fish and semi-aquatic mammals. Other Habitat Action Plans are therefore relevant to ditches and include 'Reedbeds,' 'Fens, Marshes and Swamps,' 'Farmland' (including arable fields, field margins and improved grassland), 'Hedgerows' and 'Rivers and Streams,' as well as HAPs covering woodlands (i.e. 'Wet Broadleaved Woodland') and grasslands. The areas alongside and adjoining ditches can provide important wildlife habitat as well as the water area itself. In many cases the banks of ditches have a variety of specialised and opportunistic plants as well as a range of invertebrates including dragonflies and damselflies. Ditches can be very important for reptiles (particularly grass snake), amphibians and water voles. Ditches often have an adjoining verge or field margin which can be of a grassland habitat which is less intensively managed and which provides a foraging area for many creatures from beetles to water voles.

### **THREATS**

The main factors currently affecting the County's ditches and associated habitats are:

The lack of sensitive management of the ditch itself and of adjoining land can have a major impact on the wildlife. Frequent cuts of bankside vegetation encourage dominance of a few grass species and coarse herbs and additionally cover and food for mammals can be removed. Clearance of submerged and emergent aquatic vegetation can have a major impact in some areas such as arable land which is usually well drained with deep ditches which are regularly cleared. Such ditches lose water rapidly which reduces the diversity of

flora and invertebrates. Conservation aims can, however, be incorporated into maintenance contracts to retain this habitat.

Run-off from adjacent fields and roads can cause high nutrient levels in the water, encouraging algal growth, and potentially reducing aquatic plant growth as well as physically killing any invertebrates and fish which may be present.

Management of adjacent agricultural land, such as ploughing or flailing close to the watercourse edge, and cattle damage to banks, can both reduce fringing vegetation and also undermine the bank structure leading to a need for hard edge protection. Fencing, and use of wider field margins possibly by means of grants, can do much to prevent these problems.

Harsh vegetation management, particularly with flails can result in “scalping” of water vole burrows and thus impacts the population through disturbance and exposure to increased predation.

The invasion and spread of alien and invasive species can cause a variety of threats. Alien terrestrial plant species such as Himalayan balsam, Japanese knotweed and giant hogweed can shade out native plants, and provide poorer habitats for native insects, birds and mammals along the ditch edges. Alien aquatic plants such as floating pennywort, water fern and New Zealand pygmy weed can seriously degrade the aquatic habitat and can completely choke a watercourse if no management is carried out

## **CURRENT INITIATIVES – EXAMPLES**

Nottinghamshire Wildlife Trust is working with some Internal Drainage Boards to help them in sympathetic management of ditches whilst still fulfilling their drainage function.

JNCC produced an advisory publication in 2001 ‘Habitat management for bats - A guide for land managers, land owners and their advisors’. It provides a short section of advice on how to manage ditches for bats on page 21.

## **TARGETS**

Collate records and conduct surveys of ditch systems in the county to establish a baseline of the resource (quantity and quality) within Nottinghamshire

Maintain/improve the existing environmental quality of all ditches,

Enhance quality of habitats through sustainable water use, improvement in water quality and protection and extension of good quality habitat.

Increase liaison with Internal Drainage Boards and landowners over ditch management.

## **PROPOSED ACTION**

### Policy and legislation

1. Ensure the incorporation of relevant (inter-)national law, policies and guidance into all plans and policies relating to the protection, enhancement and management of ditch habitat.

ACTION: Government Agencies, Local Authorities, NGO's.

2. Through planning control or other land use consultation processes, allow no further loss of areas of ditch habitat and seek opportunities to enhance existing areas and create new areas through approved development.

ACTION: Government Agencies, Local Authorities, NGO's.

3. Ensure agri-environment, forestry and other funding schemes include appropriate management options and design measures to suit local nature conservation needs.

ACTION: Government Agencies.

### Site safeguard and management

4. Review the extent of SSSI coverage of ditch habitat and consider notifying further sites as necessary.

ACTION: Government Agencies.

5. Designate SINCs and declare Local Nature Reserves on appropriate areas of ditch habitat or instigate other appropriate measures for their protection.

ACTION: Government Agencies, Local Authorities, NGO's.

6. Promote the uptake of positive management with owners of SSSIs, LNRs, SINCs and any other areas of ditch habitat.

ACTION: Government Agencies, Local Authorities, NGO's.

7. Carry out appropriate habitat management on sites controlled by BAP partners.

ACTION: Government Agencies, Local Authorities, NGO's.

8. Ensure sites containing ditch habitat have appropriate management plans that are working towards improving site management and condition

ACTION: Government Agencies, Local Authorities, NGO's.

9. Acquire land to ensure good habitat management or to create habitat.

ACTION: NGO's.

Advisory

10. Provide formal or informal training in management techniques for ditch habitat to land managers, site wardens, volunteers, etc.

ACTION: Government Agencies, Local Authorities, NGO's.

11. Establish demonstration sites or projects to demonstrate/publicise good habitat management techniques.

ACTION: Government Agencies, Local Authorities, NGO's.

Future research and monitoring

12. Establish and maintain a monitoring programme (a site register) to determine progress towards county HAP targets.

ACTION: Government Agencies, Local Authorities, NGO's.

13. Ensure that areas of ditch habitat are periodically resurveyed to establish extent and condition. Update resulting habitat inventory every 5 years and revise targets and HAPs if necessary.

ACTION: Government Agencies, Local Authorities, NGO's.

Communications and publicity

14. Improve public awareness and appreciation of ditch habitat by providing appropriate interpretation, education and access (where appropriate).

ACTION: Government Agencies, Local Authorities, NGO's.

15. Improve awareness of the value of, and appropriate management techniques for ditch habitat among site owners and occupiers.

ACTION: Government Agencies, Local Authorities, NGO's.

## **WHAT YOU CAN DO**

If you own or manage land with ditches consider enhancing them by managing them for wildlife as well as drainage. Contact FWAG, NE, NWT for advice.

Help by surveying your local ditches and reporting to NGBRC

### Species List

The following are examples of species of conservation concern (Appendix A) which are likely to benefit from this action plan:

- White clawed crayfish
- Red-eyed damselfly
- Variable damselfly
- Common Frog
- Great crested newt
- Grass snake
- Water vole
- Otter
- *Hygrotus quinquelineatus* (a water diving beetle)
- *Helophorus griseus* (a water scavenger beetle)
- Various *potamogeton* pondweed species