

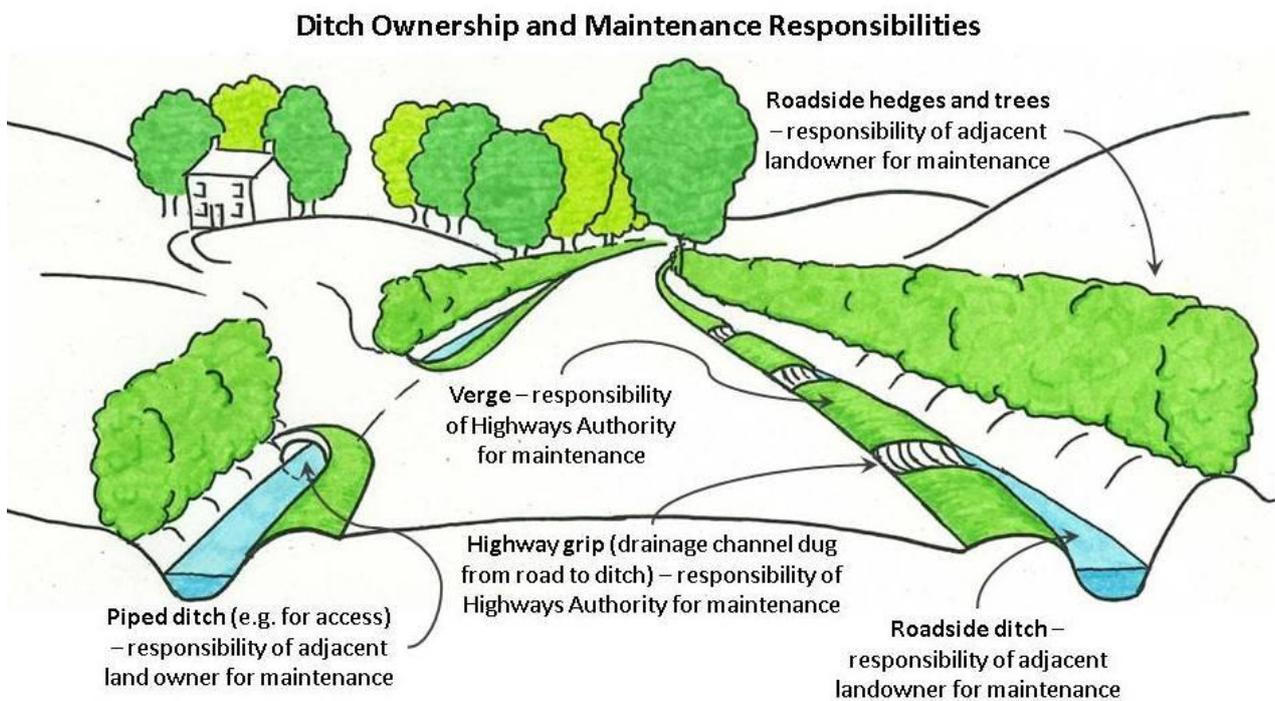


# Ditch Clearance Guidelines

## Introduction

Ditches that run within the limits of the highway do not usually form part of the highway (since they do not assist the free passage of people or vehicles along the highway) and remain the responsibility of the adjacent landowner or occupier. However, where the ditches have been designated as forming part of the highway on land owned by the Highway Authority, or where the ditch was constructed for the sole purpose of draining the highway, then the ditch will form part of the highway and will be the responsibility of the Highway Authority.

Most open ditch drainage systems are historic and are the responsibility of the adjoining landowner for maintenance, but the Highway Authority has prescriptive powers to drain into them. The Highway Authority can cleanse and restore the profile of these ditches as appropriate and charge the landowner where necessary.



As we experience increased levels of development and more intense and heavy rainfall events, the importance of maintaining and improving the capacity of the county's land drainage system has never been greater, for the following reasons:

**Reduced flooding:** Surface water drainage systems such as ditches and culverts<sup>1</sup> aim to drain excess surface water away from the land, before water levels put property, roads, land, people and the environment at risk of flooding. If the system of ditches and culverts is maintained to a good standard, any flooding is only likely to affect the floodplain. Surface water drainage systems can provide storage in addition to allowing the flow of water, so maintenance is vital to ensure this storage capacity is maintained.

<sup>1</sup> Definition of "culvert": a watercourse that has been enclosed in a structure such as a pipe



**Reduced landowner liability:** If it can be demonstrated that a flood has occurred as a direct result of a landowner not satisfying their riparian<sup>2</sup> responsibilities through proper maintenance of their ditches, that landowner could be found liable for compensating any damage that occurs. In this situation the landowner faces being taken to court by those that are affected.

**Enhanced environment:** If ditches are sensitively maintained, they can create an excellent habitat for wildlife, including protected species such as the water vole.

**A better community:** Keeping your ditches well maintained benefits the community as a whole. When an area experiences frequent flooding, this becomes a nuisance to the community, restricting access and causing a health and safety risk. The community will respect your efforts to reduce the frequency of flooding thereby enhancing everyday life within the community.

## Determine a Maintenance Programme

For all ditches for which you are responsible, it is good practice to develop a programme that sets out how often and at what time of the year you will carry out maintenance works.

Most ditches require annual maintenance to some degree. The best time of year to undertake major clearance works is in late September/October, in preparation for increased winter flows and once vegetation has already begun to naturally die back.

For **open watercourses**, your programme should state how much vegetation you plan to cut back to ensure a free flowing watercourse. It should also identify at what intervals you will remove silt from the bed of the watercourse to maintain the capacity of the ditch.

For **culverted watercourses**, your programme should state how often you would inspect the culvert for blockages or signs of collapse.

For **structures** along your watercourse, such as weed screens, grilles, or sluices, your programme should include a routine for inspection and clearance of structures, especially including times of high flow.

## Mowing and Trimming Vegetation

When trimming bank side vegetation it is important to consider any impact on biodiversity. Mowing of banks around ditches should be minimised during the animal spawning season of March to mid July. When trimming the banks, it is recommended to cut only up to just above the water level on one side so leaving the fringe of the bank uncut, thereby maintaining some habitat as well as clear flow in the ditch. Any cuttings should be removed to prevent contamination of the watercourse or causing blockages downstream.

## De-Silting

When de-silting ditches, it is important to consider any impact on biodiversity. Temporarily depositing silt on top of the banks of the watercourse allows for organisms to migrate back into the ditch. It is however essential that this material does not then block the highway grips or that the material is carried on to the road.

Where possible, try to maintain the original profile and cross section of the ditch when de-silting. If the gradient is altered it can change the flow pattern and increase flood risk either upstream or downstream.

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<sup>2</sup> Definition of "riparian": of, relating to, or situated on the banks of a watercourse



Therefore the same depth of silt should be removed along the length of the ditch. Banks with a gradient of 1-in-4 allow for easy maintenance as well as being suitable for wildlife.

## Consider the Environment

Ditches can form very important habitats and may contain species of flora and fauna that are protected under the Wildlife and Countryside Act 1981 (as amended). To find out if protected species have been recorded on or near your land, contact The Northamptonshire Biodiversity Record Centre [nbrc@wildlifebcn.org](mailto:nbrc@wildlifebcn.org) 01604 400448, or the Environment Agency's local Fisheries and Biodiversity team 03708 506 506.

Ensure that you undertake the majority of your clearance works after the vegetation has begun to die back in late September/October. At this time of year, there should also be no fauna nesting or breeding in or near the ditches.

The impacts of maintenance can be minimised by using hand tools to regularly remove obstructions to the flow of water, rather than using heavy machinery to denude a ditch of all vegetation.

Plan your maintenance to ensure that stretches of habitat are left intact, for example by trimming alternate banks or lengths of ditch each year. This ensures that there is always a healthily vegetated area where fauna disturbed by maintenance can migrate to without being forced to leave the ditches.

It is recommended that any waste resulting from the maintenance of ditches is left on top of the bank for a few days to allow any organisms within the waste to migrate back into the ditches, after which the waste should be removed.

## Use the Right Tools for the Job

The tools for the job depend on the scale of your ditch drainage system and the extent of works required. For landowners, the maintenance of ditches is generally best achieved using hand tools, as this is less damaging to habitats. It is better to undertake minor works regularly, such as trimming vegetation and clearance of small blockages and restrictions as they occur, rather than infrequent major destructive works, such as complete removal of vegetation and silt from all the ditches every few years.

Farmers generally have machinery on site that can clear large stretches of open ditches quickly. If using such machinery, the sensitivity of the ditches must be considered and maintenance should be planned to minimise the impact on the habitats.

For culverts, specialist tools may be needed to carry out inspections using camera surveys or to jet through or rod the culvert to clear blockages. Landowners may choose to appoint drainage companies to carry out inspections and/or maintenance. It is recommended that a range of quotes are obtained in order to achieve best value.

## Health and Safety

When undertaking works within or adjacent to a watercourse, landowners must assess their works to ensure that they can be undertaken without putting themselves or others at any kind of risk. Due to the range of risks posed by both open and culverted watercourses, landowners should assess this on a case-by-case basis.



When undertaking ditch clearance works within the highway, adequate notice must be given to the travelling public warning of the works, particularly if the operation is working from the live carriageway. Only authorised signs should be used, actual requirements would depend on the specific location.

## Staying Legal

Whenever carrying out maintenance to ditches, the landowner must ensure that the works they undertake are legal.

A general rule of thumb is to avoid undertaking heavy works during the period from March to September inclusive. If protected species have been recorded in your ditches, you must ensure their habitats are not adversely affected in the long term.

General maintenance of a ditch is unlikely to break the law, but if you wish to alter the ditch in any way, or build near it, you are likely to require permission from the Environment Agency, Northamptonshire County Council and/or the relevant landowners.

Many farmers take part in Countryside Stewardship Schemes, which set clear rules for the maintenance of watercourses, including ditches. If these rules are not adhered to landowners risk breaking the rules of such agreements and may be penalised.

## Further Reading and Advice

- The Environment Agency's booklet "Living on the Edge" contains information for riparian watercourse owners: <http://www.environment-agency.gov.uk/homeandleisure/floods/31626.aspx>
- The Environment Agency has a frequently asked questions document relating to their maintenance of watercourses: <http://www.environment-agency.gov.uk/research/policy/31740.aspx>
- The Environment Agency has a suite of documents relating to maintenance of watercourses and flood defences: <http://www.environment-agency.gov.uk/research/policy/135650.aspx>
- Northamptonshire County Council Guide "Riparian Ownership and Flood Risk": <http://www.floodtoolkit.com/pdfs/15%20Riparian%20Responsibilities/15.Riparian-responsibilities.html>
- Northamptonshire County Council advice on consenting for works in or near watercourses: <http://www.floodtoolkit.com/pdfs/16%20Consenting/16.Consenting.html>
- Natural England and Association of Drainage Authorities' report "The Drainage Channel Biodiversity Manual" provides detailed advice on protecting wildlife during maintenance: <http://publications.naturalengland.org.uk/publication/50004>