

Guide to
Ordinary watercourse maintenance

As a Lead Local Flood Authority, Essex County Council is responsible for overseeing the management of flooding from surface water and local drainage systems such as watercourses and drains.

We also have powers under the Land Drainage Act 1991 to consent works on an ordinary watercourse; alongside an enforcement role in relation to unconsented works and unmaintained watercourses.

To find out if you are at risk from surface water, main river, coastal and ground water visit:

www.environment-agency.gov.uk/floodrisk

Contents:

Introduction	3
Importance of ordinary watercourses	4
Who is responsible?	6
Maintenance programme	10
Mowing and trimming vegetation	11
De-silting	12
Consider the environment	13
Using the right tools	14
Health and safety	15
Staying legal	16
Further reading and advice	17

If you own land or property alongside a watercourse, then this guide will offer you advice on maintenance.

Ordinary watercourses are an important part of flood risk management. Ordinary watercourses are channels through which water can flow and that do not form part of the classified main rivers network; such as streams, drains, open ditches, cuts, culverts, sluices, dykes and surface water sewers (other than public sewers). They also incorporate sustainable drainage systems (SuDS) which are increasingly common in new developments, such as swales, ponds, rills, filter drains etc.

As we experience increased levels of development and more intense and heavy rainfall events, the significance of maintaining and improving the capacity of local drainage systems has never been greater.

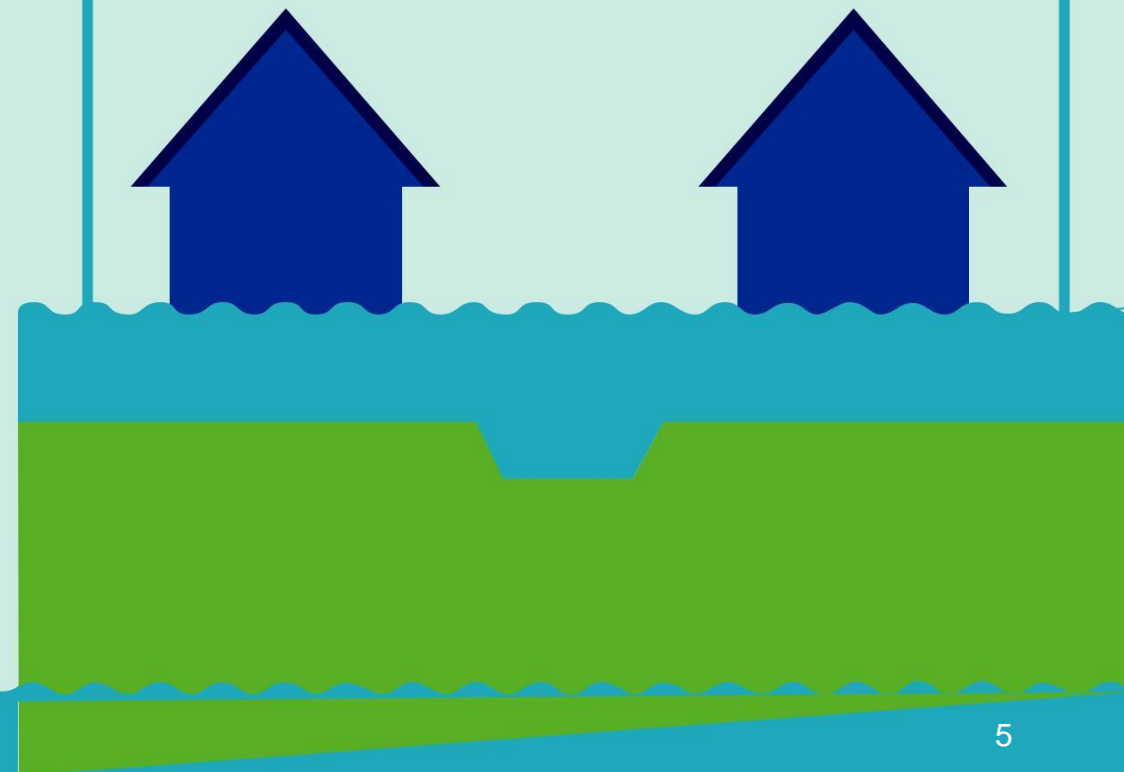
Why is it important to ensure ordinary watercourses are working correctly?

Reduced flooding: Surface water drainage systems such as ditches and culverts aim to drain surface water away from the land surface. During average rainfall, drainage should ensure that property, roads, land, people and the environment are safe from flooding. If a system of ditches and culverts is maintained to a good standard, flooding is only likely to affect the floodplain during more extreme rainfall events. Surface water drainage systems can provide storage and attenuation in addition to allowing the flow of water, so their regular maintenance is vital to ensure this storage capacity is maintained.

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 wider public, 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.

Reduced landowner liability: If it can be demonstrated that a flood has occurred as a direct result of a landowner not satisfying their riparian 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 the possibility of being taken to court by those that have been affected.

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



Who is responsible?

Many ordinary watercourses are not owned by the Local Authority or Highways Authority but are the responsibility of the adjacent land owner under riparian ownership. It is not the responsibility of Essex County Council, Essex Highways or the district and borough councils to carry out maintenance or improvement works in these situations.

What is a riparian owner?

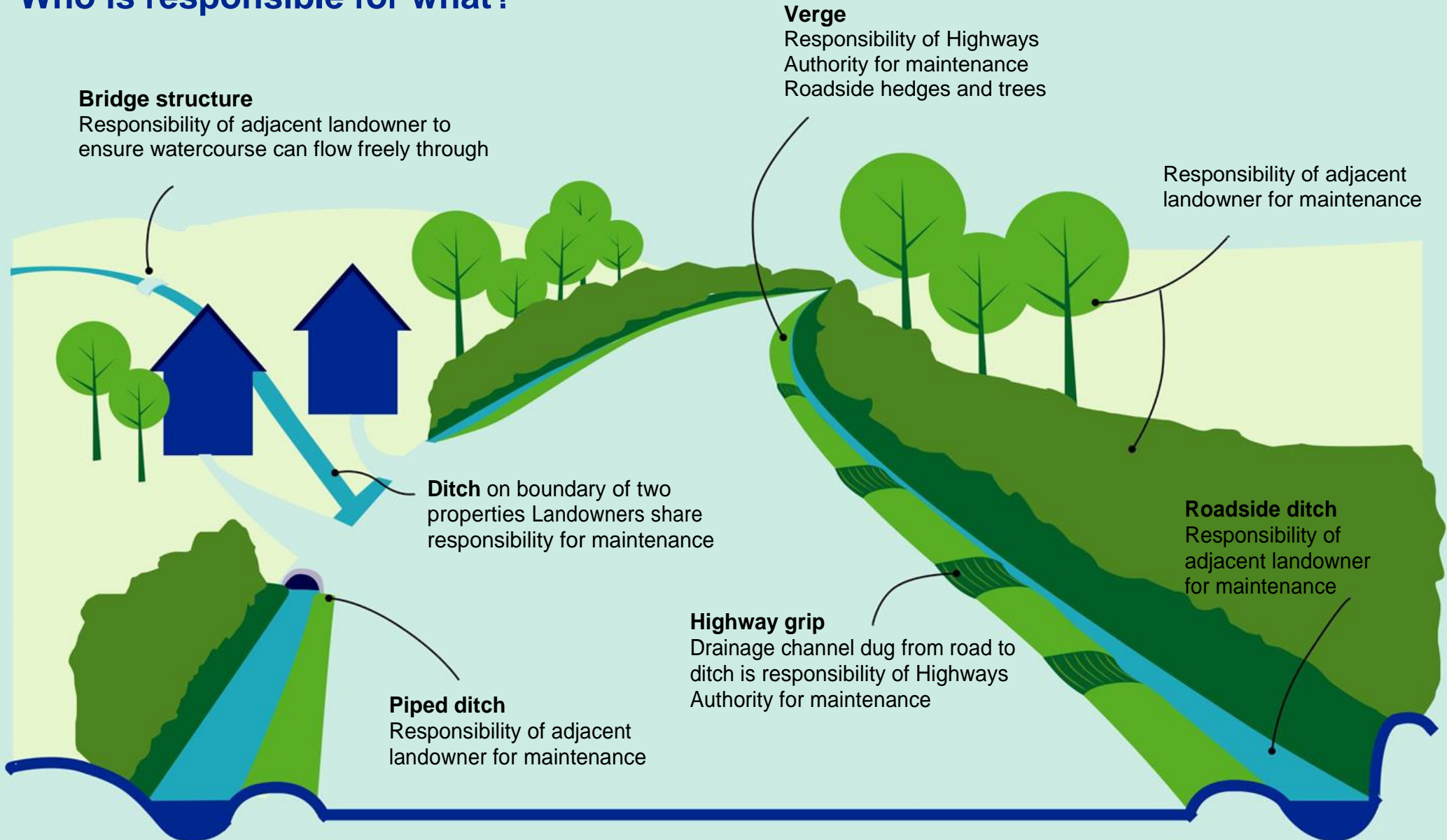
Under common law, as a property owner, you are a riparian owner of any ordinary watercourse within or adjacent to your property. Where a watercourse falls between the boundaries of two land owners, law assumes you own the land up to the centre point of the watercourse unless you have documentation stating otherwise. This means that you and your neighbouring land owner are responsible for the maintenance and water flow within the watercourse where it borders your land.

Highways Authority responsibilities

Ditches that run parallel to the highway boundary 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 Highways 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 Highways Authority.

Most open watercourses are historic and are the maintenance responsibility of the adjoining landowner, but the Highways Authority has prescriptive powers to drain into them. Under the Land Drainage Act 1991 Essex County Council has the power to enforce land owners to maintain their section of an ordinary watercourse. Essex County Council also have the power to cleanse and restore the profile of an ordinary watercourse, where it is deemed appropriate, recovering the costs from the land owner.

Who is responsible for what?



Maintenance Programme for ordinary watercourse

It is good practice to develop a programme that sets out how often and at what time of the year maintenance work is carried out.

Most ditches require annual maintenance to some degree, but the frequency will be dependent on the amount of material you receive from upstream. 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. You should inspect your watercourse regularly to ensure no blockage has occurred.

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.

Culverted watercourses

Your programme should state how often you will inspect the culvert for blockages or signs of collapse.

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

Mowing and trimming vegetation

Mowing and trimming of a watercourse offer an effective way of managing vegetation growth and ensuring that flow within the channel is not compromised. Biodiversity needs to be considered when carrying out maintenance on an ordinary watercourse. To minimise the impact of mowing banks, do this less frequently during the 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 and disposed of correctly to prevent contaminating the watercourse or causing blockages downstream.

There are several hundred invasive plants in the UK. Japanese knotweed and giant hogweed are protected under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and can be found along ordinary watercourses. You must not plant invasive plants intentionally and if you have invasive plants on or adjacent to an ordinary watercourse, you must not allow them to spread off site. Japanese knotweed can cause issues with the stability of river banks whilst giant hogweed can cause harm to human health.

More information can be found at:

www.nonnativespecies.org



De-silting

Silt build-up within an ordinary watercourse gets worse with time and becomes more expensive to rectify. Regular removal of silt is much more cost effective and will ensure the watercourse remains in full working order. When de-silting ditches, it is important to consider any impact on biodiversity. Therefore it is suggested to temporarily deposit silt on top of the banks of the watercourse, this 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. The silt material can be spread on the adjoining land if the owner grants permission.

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

Ditch networks are important ecosystems, often providing both aquatic and terrestrial habitat for a range of species, some of which may be protected under UK and European legislation.

Protected wildlife that are frequently observed within and around ditches include: nesting birds, water voles, great crested newts and reptiles. These species are legally protected and any works should be sensitive of their presence. If you are in any doubt that works may harm a legally protected species, contact a qualified ecologist for advice on how to proceed.

The impacts of ditch maintenance on ecology can be minimised by:

- ◆ Timing works sensitively (for example timing vegetation removal between September and March to avoid the nesting season);
- ◆ Using hand tools, rather than heavy machinery to undertake any work affecting the channel or banks;
- ◆ Being aware of the role your ditch plays in habitat connectivity into the wider landscape and leaving bankside and marginal vegetation wherever possible;
- ◆ Depositing any arising's on top of the bank and leaving in situ for at least 24 hours to allow wildlife to disperse before removing;
- ◆ Trimming alternate banks each year;
- ◆ Demonstrating due diligence and acting appropriately if protected species are encountered.

For further ecology advice, survey or mitigation recommendations, please contact Place Services Ecology on:

ecology.placeservices@essex.gov.uk

Using the right tools

The tools for the job depend on the size of your ditch and the amount 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 carrying out maintenance on an ordinary watercourse the landowner must assess the task that is to be undertaken and ensure that the work may be carried out without putting themselves or others in any form of harm. The dynamic nature of open and culverted watercourses means that landowners are required to assess the risk on a case-by-case basis. The appropriate clothing and protective wear should be worn by all involved in the maintenance.

When carrying out maintenance closed footwear such as boots or wellies should be worn. If stinging nettles and brambles are present protective gloves, long sleeved tops and trousers are advised. High visibility jackets are recommended when carrying out maintenance on watercourses near a road.

Works that will affect the highway, such as road closures for large vehicles, will require adequate notice to be given to the travelling public, warning of the works. Only authorised signs should

be used, actual requirements would depend on the specific location. The increased risk of working near a road will need to be considered when carrying out maintenance. If the road will be affected then you will need to apply for a temporary Traffic Regulation Order (TRO) from Essex Highways.

Legal considerations

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, Essex 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 and further information about watercourse maintenance:

www.environment-agency.gov.uk

Essex Highways Traffic Regulation Order advice and application form:

www.essexhighways.org

Essex County Council's information on Ordinary Watercourse Regulations and Flood and Water Management in Essex: www.essex.gov.uk/flooding

Natural England and Association of Drainage Authorities' report "The Drainage Channel Biodiversity Manual" provides detailed advice on protecting wildlife during maintenance: www.gov.uk

Notes

Notes

This information is issued by

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