**Highways Activity Information Drainage**

**Highway Drains**

The presence of water on the public highway can be caused by number of reasons and different organisations are responsible for flooding in different situations.

Staffordshire County Council is responsible for highway drains and our focus is to keep the roads free from surface water run-off that could cause ponding / flooding and damage to the structure of the road.

Cyclical emptying of the county’s 190,000+ gullies will continue to take place. This work is directed by a routine programme based on detailed knowledge of the condition of the gullies such as silt-level readings taken during previous cleanses. Gullies on major roads are likely to be cleansed more regularly than those on less well-used routes.

Works to repair faults or damage that appear in the drainage systems, and outfalls that the gullies discharge into, in addition to ad hoc cleansing works; will continue to be identified and prioritised to alleviate flooding of the highway where it might affect the safety of the travelling public and/or cause damage to private property.

**Clearing Gully-tops**

Sometimes a gully may fail to catch surface water if leaves and debris have collected on the gully lid. Simple removal of the detritus will bring the gully back into working order.

**Method Statement**

Before you start:

Check with your Community Highway Liaison Officer which organisation is responsible for maintenance of the highway drain in question. Private or un-adopted roads/estates are not Highway Maintainable at Public Expense and usually a private contractor is used to keep private highway drains clear.

Consider the specific location and its physical conditions, including where the highway drain is located. Some are in the carriageway (road) and some are part of the footway (pavement) structure. This might require a site visit in advance of any works and you could consider taking photographs of the location to assist with planning works.

Give careful consideration to the volumes of pedestrian and vehicular traffic moving around the location and whether the area you will be working on is likely to be affected by this.

The [‘Safety at street works and road works: A code of practice 2013’](https://www.gov.uk/government/publications/safety-at-street-works-and-road-works) document provides information for the signing, lighting and guarding of street works and road works. The code of practice applies on highways and roads, except all motorways and any dual carriageways with a speed limit of 50 mph or more.

If the Urban or rural road has **high** traffic volumes and speeds consider employing a qualified contractor to cover the necessary requirements to book road space, install traffic management, apply for a permit to dig etc. Inform your CHLO of your intentions to identify and mitigate concerns.

Consider whether there are any local facilities nearby such as schools or post offices etc. that may generate traffic or pedestrians at certain times.

Consider your own/operative’s safety and the likely impact of the activity on the safety of pedestrians and any passing traffic.

Consider whether there are any nearby roadworks or other planned activities such as community events that may affect access to the site or the times that works can be carried out.

Consider how the operatives will arrive at the site including what vehicle/s they will be using and where these will be parked.

Consider how materials will be removed from the site such as debris/leaves and how these will be disposed of.

Choosing the right equipment

Once you have considered the location, determine the finish/appearance that is required and what type of equipment would be appropriate to achieve this, e.g. stiff brush, shovel, hand tools etc, bearing in mind your earlier observations about the site and passing traffic/pedestrians.

Ensure all users are familiar with the equipment they are going to be using and that it is regularly inspected and maintained in accordance with the manufacturer’s instructions.

Ensure all operatives have the necessary Personal Protective Equipment required for the tools being used and the location, e.g. appropriate footwear, gloves etc. Hi-visibility and reflective clothing should be comfortable to the wearer but secure enough that it does not become loose and interfere with any machine or hand tools.

If it is necessary for operatives to be working in the carriageway then this sign should be used:

 It advises the motorist that the carriageway may be restricted.

When using signage, consideration should be given to the size of the area being worked on and how long you expect to stay within a given area. The distance between the signs should be kept to a minimum and these should be placed at both ends of the working zone but never more than a mile apart. The distance between the signs can be reduced/extended as required.

Undertaking works

All tools and machinery must be in a safe and good working order and checks made before use. Any safety features and any screws/bolts or other fitments should be securely fixed in line with the manufacturer’s instructions.

Gulley tops should **never** be cleared by hand, even if the operative is wearing gloves, as these may not protect the wearer from potentially hidden hazardous materials.

Before commencing works, remove any obvious obstructions such as large rocks/debris or other litter.

Detritus should be disposed in such a way that further rain does not direct it back to the original gully or a gully further downstream.

Consider taking photographs of the site which is to be treated before commencing works and once the works are completed, particularly when working near private property. This may help resolve any future disputes or allegations about damage to third party property.

Hazards to consider

At all times operators should consider their proximity to public highway users as it may be necessary to periodically cease works to allow passing vehicles/pedestrians, depending on the area being treated.

Consider the likelihood of flying debris and hidden or unexpected objects such as glass, rocks, needles etc.

Consider the possibility of injury from hand tools.

Operators should consider their proximity to private property and vehicles and take extra care around street furniture or third party apparatus.

Ensure that, where removed deposits need to be manually lifted, they are appropriately contained and of a manageable weight, so as to avoid personal or public injury.

**Clearing Drainage Outfall Grills**

Debris collecting at drainage grills can reduce the flow of water and cause issues up-stream.

**Method Statement**

Before you start

Accessing drainage grills at outfalls into watercourses needs careful consideration of personal safety risks including the potential for drowning and exposure to harmful substances.

Consult with your Community Highway Liaison Officer with plans to undertake any of these activities so that a site specific risk assessment can be carried out which will consider the location and its physical conditions. A site visit in advance of any works and photographs of the location will assist with planning works.

Drainage outfalls are often on private property; therefore, the landowner’s permission and agreement on when and how you plan to access the site would need to be sought before accessing the drainage grill.

Give careful consideration to any pedestrian/vehicular traffic moving around the location and whether the area you will be working on is likely to be affected by this.

The [‘Safety at street works and road works: A code of practice 2013’](https://www.gov.uk/government/publications/safety-at-street-works-and-road-works) document provides information for the signing, lighting and guarding of street works and road works. The code of practice applies on highways and roads, except all motorways and any dual carriageways with a speed limit of 50 mph or more.

If the Urban or rural road has **high** traffic volumes and speeds consider employing a qualified contractor to cover the necessary requirements to book road space, install traffic management, apply for a permit to dig etc. Inform your CHLO of your intentions to identify and mitigate concerns.

Consider whether there are any local facilities nearby such as schools or post offices etc. that may generate traffic or pedestrians at certain times.

Consider your own/operative’s safety and the likely impact of the activity on the safety of pedestrians and any passing traffic.

Consider whether there are any nearby roadworks or other planned activities such as community events that may affect access to the site or the times that works can be carried out.

Consider how the operatives will arrive at the site including what vehicle/s they will be using and where these will be parked.

Consider how materials will be removed from the site such as debris/waste and how these will be disposed of.

Choosing the right equipment

Once you have considered the location, determine the finish/appearance that is required and what type of equipment would be appropriate to achieve this, e.g. stiff brush, shovel, hand tools etc, bearing in mind your earlier observations about the site and passing traffic/pedestrians.

Ensure all users are familiar with the equipment they are going to be using and that it is regularly inspected and maintained in accordance with the manufacturer’s instructions.

Ensure all operatives have the necessary Personal Protective Equipment required for the tools being used and the location, e.g. appropriate footwear, gloves etc. Hi-visibility and reflective clothing should be comfortable to the wearer but secure enough that it does not become loose and interfere with any machine or hand tools.

Undertaking works

All tools and machinery must be in a safe and good working order and checks made before use. Any safety features and any screws/bolts or other fitments should be securely fixed in line with the manufacturer’s instructions.

Before commencing works, remove any obvious obstructions such as large rocks/debris or other litter.

Detritus should be disposed in such a way that further rain does not direct it back to the original gully or a gully further downstream.

Consider taking photographs of the site which is to be treated before commencing works and once the works are completed, particularly when working near private property. This may help resolve any future disputes or allegations about damage to third party property.

Hazards to consider

At all times operators should consider their proximity to public highway or Rights of Way users as it may be necessary to periodically cease works to allow passing vehicles/pedestrians, depending on the area being treated.

Consider the likelihood of flying debris and hidden or unexpected objects such as glass, rocks, etc.

Consider the possibility of injury from hand tools.

Operators should consider their proximity to watercourses and ensure any ground underneath their footing is sturdy so as to prevent slipping or falling.

An ordinary watercourse is every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows and which does not form part of a main river.

Operators should consider their proximity to private property and vehicles and take extra care around third party apparatus.

Ensure that, where removed deposits need to be manually lifted, they are appropriately contained and of a manageable weight, so as to avoid personal or public injury.

**Shallow Ditching**

Good drainage is essential for the maintenance of a highway. Rural areas rely on ditches for the removal of water and their effectiveness is fundamental in keeping roads in good condition. It is essential that the foundations of the carriageway are drained and not allowed to become water-logged.

**Ditches and the Law**

The common law imposes a duty on the occupier of the land adjoining the highway to clean ditches, drains etc which are necessary for draining the highway.

There are two categories of ditches that run alongside the highway:

1. Those provided and maintained by the Highway Authority for the sole purpose of draining the highway.
2. Those existing for the purposes of land drainage and which are privately maintained.

Where a ditch is used jointly for highway water and land drainage then *the law presumes that the adjoining landowner is responsible for the maintenance* unless there is conclusive proof to the contrary. If you own land adjoining a watercourse, you have certain rights and responsibilities. In legal terms you are a ‘riparian land owner’.

**Method Statement**

Before you start

The following applies only to **existing** drainage ditches. Where it is deemed that the introduction of a new ditch may assist with drainage related problems, this should always be discussed with the local Community Highway Liaison Officer.

Establish ownership and remind riparian landowners of their responsibilities.

If the ditch is determined to be under the maintenance responsibility of the Highway Authority or, the riparian landowner has provided consent for works to be undertaken, consult with your Community Highway Liaison Officer so that a site specific risk assessment can be carried out which will consider the location and its physical conditions. A site visit in advance of any works and photographs of the location will assist with planning works.

If prior consent has been given by the riparian landowner, permission and agreement on when and how you plan to access the site would need to be sought before accessing the ditch.

Give careful consideration to any pedestrian/vehicular traffic moving around the location and whether the area you will be working on is likely to be affected by this.

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If the Urban or rural road has **high** traffic volumes and speeds consider employing a qualified contractor to cover the necessary requirements to book road space, install traffic management, apply for a permit to dig etc. Inform your CHLO of your intentions to identify and mitigate concerns.

Consider your own/operative’s safety and the likely impact of the activity on the safety of pedestrians and any passing traffic.

Consider whether there are any nearby roadworks or other planned activities such as community events that may affect access to the site or the times that works can be carried out.

Consider how the operatives will arrive at the site including what vehicle/s they will be using and where these will be parked.

Consider how materials will be removed from the site such as debris/waste and how these will be disposed of.

Consideration should be given to the likelihood of utility apparatus in the vicinity.

Consideration should be given to the potential collapse of the sides of the ditch and the health and safety of people working on it.

Choosing the right equipment

Once you have considered the location, determine the finish/appearance that is required and what type of equipment would be appropriate to achieve this, e.g. shovel, hand tools etc, bearing in mind your earlier observations about the site and passing traffic/pedestrians.

Ensure all users are familiar with the equipment they are going to be using and that it is regularly inspected and maintained in accordance with the manufacturer’s instructions.

Ensure all operatives have the necessary Personal Protective Equipment required for the tools being used and the location, e.g. appropriate footwear, gloves etc. Hi-visibility and reflective clothing should be comfortable to the wearer but secure enough that it does not become loose and interfere with any machine or hand tools.

Undertaking works

All tools and machinery must be in a safe and good working order and checks made before use. Any safety features and any screws/bolts or other fitments should be securely fixed in line with the manufacturer’s instructions.

Before commencing works, remove any obvious obstructions such as large rocks/tree branches or other debris or litter.

Ditches should be cleared and the depth maintained as necessary to ensure that the efficiency of the system is not impaired and that water is able to discharge freely.

Any excavated material must be removed from the vicinity of the ditch so that it is not washed, or pushed back in.

Consider taking photographs of the site which is to be treated before commencing works and once the works are completed, particularly when working near private property. This may help resolve any future disputes or allegations about damage to third party property.

**Piping Ditches**

No ditch adjacent to the highway should be piped until the Local Highway Authority and adjacent/riparian landowner have been consulted. They will wish to ensure that the proposed pipes are of a sufficient size.

Hazards to consider

At all times operators should consider their proximity to public highway or Rights of Way users as it may be necessary to periodically cease works to allow passing vehicles/pedestrians, depending on the area being treated.

Consider the likelihood of hidden or unexpected objects such as glass, rocks, etc.

Consider the possibility of injury from hand tools.

Operators should consider their proximity to watercourses and ensure any ground underneath their footing is sturdy so as to prevent slipping or falling.

An ordinary watercourse is every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows and which does not form part of a main river.

Operators should consider their proximity to private property and vehicles and take extra care around third party apparatus.

Ensure that, where removed deposits need to be manually lifted, they are appropriately contained and of a manageable weight, so as to avoid personal or public injury.

**Digging Grips**

Grips are a short open ditch from the side of a surfaced road, through a raised verge area, to a ditch or other drainage feature; preventing standing water from building up on the road surface. They can be easily damaged by vehicles driving over verges on narrow rural lanes. Grips are typically a spade-width wide at its base with 45 degree sloping sides to stop it collapsing in on itself.

Before you start

Establish ownership of the verge area as not all grassed areas next to roads form part of the public highway. Consent from the local district/borough council may be necessary

The following applies only to sites where drainage grips already exist or have existed previously. The digging of grips can be problematic if this feature did not exist beforehand and it could cause problems with the overall drainage system in an area. Grips cannot be introduced on private land/fields as this can cause private land to become waterlogged.

If the verge is determined to be under the maintenance responsibility of the Highway Authority or, the landowner has provided consent for works to be undertaken, consult with your Community Highway Liaison Officer so that a site specific risk assessment can be carried out which will consider the location and its physical conditions. A site visit in advance of any works and photographs of the location will assist with planning works.

Give careful consideration to any pedestrian/vehicular traffic moving around the location and whether the area you will be working on is likely to be affected by this.

The [‘Safety at street works and road works: A code of practice 2013’](https://www.gov.uk/government/publications/safety-at-street-works-and-road-works) document provides information for the signing, lighting and guarding of street works and road works. The code of practice applies on highways and roads, except all motorways and any dual carriageways with a speed limit of 50 mph or more.

If the Urban or Rural road has **high** traffic volumes and speeds consider employing a qualified contractor to cover the necessary requirements to book road space, install traffic management, apply for a permit to dig, etc. Inform your CHLO of your intentions to identify and mitigate concerns.

Consider your own/operative’s safety and the likely impact of the activity on the safety of pedestrians and any passing traffic.

Consider whether there are any nearby roadworks or other planned activities such as community events that may affect access to the site or the times that works can be carried out.

Consider how the operatives will arrive at the site including what vehicle/s they will be using and where these will be parked.

Consider how materials will be removed from the site such as debris/waste and how these will be disposed of.

Consideration should be given to the likelihood of utility apparatus in the vicinity.

Consideration should be given to the potential collapse of the sides of nearby ditches and the health and safety of people working in the area.

Choosing the right equipment

Once you have considered the location, determine the finish/appearance that is required and what type of equipment would be appropriate to achieve this, e.g. shovel, strimmer etc, bearing in mind your earlier observations about the site and passing traffic/pedestrians.

Ensure all users are familiar with the equipment they are going to be using and that it is regularly inspected and maintained in accordance with the manufacturer’s instructions.

Ensure all operatives have the necessary Personal Protective Equipment required for the tools being used and the location, e.g. appropriate footwear, gloves etc. Hi-visibility and reflective clothing should be comfortable to the wearer but secure enough that it does not become loose and interfere with any machine or hand tools.

If it is necessary for operatives to be working in the carriageway then this sign should be used:

 It advises the motorist that the carriageway may be restricted.

When using signage, consideration should be given to the size of the area being worked on and how long you expect to stay within a given area. The distance between the signs should be kept to a minimum and these should be placed at both ends of the working zone but never more than a mile apart. The distance between the signs can be reduced/extended as required.

Undertaking works

All tools and machinery must be in a safe and good working order and checks made before use. Any safety features and any screws/bolts or other fitments should be securely fixed in line with the manufacturer’s instructions.

Before commencing works, remove any obvious obstructions from the verge such as large rocks/tree branches or other debris or litter.

Grips should be dug out so as they are a spade-width wide at the base with 45 degree sloping sides.

Any excavated material must be removed from the vicinity of the grip so that it is not washed, or pushed back in.

Position the grip/s at locations where surface water ponds or at regular intervals to catch surface water running down a road.

The grips should be installed perpendicular to a road that is level or angled at 45 degrees to catch surface water running down a bank.

Keep grips clear of debris and regularly check for obstructions.

Consider taking photographs of the site which is to be treated before commencing works and once the works are completed, particularly when working near private property. This may help resolve any future disputes or allegations about damage to third party property.

Hazards to consider

At all times operators should consider their proximity to public highway users as it may be necessary to periodically cease works to allow passing vehicles/pedestrians, depending on the area being treated.

Consider the likelihood of hidden or unexpected objects such as glass, rocks, etc.

Consider the use of the verge by the travelling public and do not introduce tripping hazards.

Consider the possibility of injury from hand tools.

Operators should consider their proximity to watercourses and ensure any ground underneath their footing is sturdy so as to prevent slipping or falling.

An ordinary watercourse is every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows and which does not form part of a main river.

Operators should consider their proximity to private property and vehicles and take extra care around third party apparatus.

Ensure that, where removed deposits need to be manually lifted, they are appropriately contained and of a manageable weight, so as to avoid personal or public injury.