

Wokingham Borough Council

Culverting Guidance Notes

1 Purpose

Wokingham Borough Council, as the Lead Local Flood Authority, became responsible for ordinary watercourse consent applications under Section 23 of the Land Drainage Act 1991 on 06 April 2012.

Before this date, the Environment Agency dealt with works of this nature and produced extensive guidance on the subject. We have therefore adopted many of the principles and policies that the Environment Agency have worked to over the years.

This guidance note has been adapted from the Environment Agency's 'Culvert Policy' documents and provides a detailed explanation of our view on works to watercourses, with particular regard to culverts. It is intended for use by planning authorities, Highway engineers, landowners and developers.

2 Introductions

Watercourses fulfil many roles in today's environment. They provide drainage for developed and agricultural land and can be vital water resources, while some also have important recreational value. They are important features of the landscape and provide habitats for a wide variety of wildlife. It is therefore important that watercourses and their associated habitats are protected and enhanced for the benefit of present and future generations.

3 Legal Requirements

The following works require ordinary watercourse consent from the Lead Local Flood Authority (Wokingham Borough Council) under Section 23 of the Land Drainage Act 1991:

- a) erect any mill dam, weir or other like obstruction to the flow of any ordinary watercourse or raise or otherwise alter any such obstruction; or
- b) erect a culvert in an ordinary watercourse, or
- c) alter a culvert in a manner that would be likely to affect the flow of an ordinary watercourse.

For works affecting Main Rivers the prior written consent of the Environment Agency is required under the Water Resources Act 1991 and Environment Agency Byelaws.

4 Enforcement actions against unconsented works

If any of the above works are carried out without consent, we have the power to serve notice on the person who carried out the work (if they have the ability to remove the obstruction at the time the notice is served) or the person having ability to remove the obstruction. If the notice is not complied with by the date specified on the notice then the person responsible may be enforced against, or we are entitled to carry out the necessary works to remove or alter the work and recover its expenses from the person named on the notice. We will take a risk-based approach to enforcement action taking into account the location and nature of the unconsented works, whether they are likely to increase flood risk and what the consequences of any increase in risk may be. The cost-benefit of pursuing an enforcement case will also be investigated to ensure we would be delivering value for money to the tax-payer.

5 Wokingham Borough Council Policy

We are in general opposed to the culverting of watercourses because of the adverse ecological, flood defence and other effects discussed above. We will therefore only approve an application to culvert a watercourse if there is no reasonably practicable alternative or if the detrimental effects of culverting would be so minor that they would not justify a more costly alternative.

In all cases where it is appropriate to do so, adequate mitigation must be provided for damage caused. Wherever practical we will seek to have culverted watercourses restored to open channels.

6 Reasons for the Policy

6.1 Loss of environmental features

Culverting has a detrimental impact on the environment, resulting in a loss of features within a watercourse. The continuity of the river corridor is broken, adversely affecting the landscape and ecological value of the watercourse for migrating species. An existing or potential amenity would also be lost for present and future generations.

6.2 Increased likelihood of blockages and flooding

Compared with an open channel there is an increased risk of blockage once a culvert is installed. If the blockage occurs within the culvert, there is much greater difficulty in removing it.

It is sometimes argued that culverting will reduce the problem of open channels subject to litter and fly-tipping. Such short-term advantages are outweighed by the overall disadvantages, and alternative means should be pursued to address rubbish problems. Flooding is more likely to result from culverts when they become obstructed, and culverted channels also provide less flood storage than open ones. There have also been cases of serious flooding caused by culverts collapsing due to root damage from vegetation or the weight of development above them.

Culverting will create a less permeable bed to a watercourse and often increases the speed of water flow, possibly increasing flood risk downstream and also preventing local recharge of groundwater

6.3 Increased difficulties in providing new drainage connections, and the repair, maintenance and replacement of culverts.

Drain connections are more easily made to open watercourses where the performance of drainage systems can be visually monitored. Outfalls within culverts are prone to blockage or, in the case of flapped outfalls, can seize up. Maintenance of these outfalls is considerably easier in open channels.

Culverts conceal the presence of a watercourse and can lead to development or unacceptable land-use above or near them. In many urban areas buildings have been constructed above or adjacent to culverts. This means that improving standards of flood protection or accommodating run-off from future developments could be impossible or uneconomic due to the cost of replacing or enlarging existing culverts.

The responsibility for the condition and maintenance of a culvert lies with the landowner or the owner of the culvert unless other agreements are in place. The responsible party must therefore ensure that the culvert remains in good condition and free from obstructions. Failure to do so could result in liability for any damage caused by flooding. Access to culverts is generally safe only with the use of special procedures and equipment, making inspection and maintenance both difficult and costly.

6.4 Pollution and effect on water quality

Culverting a watercourse makes the early detection and tracing of pollution sources more difficult, resulting in the adverse impacts being more serious. There is further impact on water quality due to the loss of the biological processes which are essential for river purification, and there is normally a reduction in oxygenation of water passing through a culvert. Culverting may also result in stagnant water problems, particularly if culvert levels are badly planned or constructed.

7 Consent Process

Landowners and developers should seek our advice as early as possible on any proposal, allowing sufficient time before the intended start date of the development or works. The consent application forms and details on how to apply and pay the appropriate fee are available on our website at www.wbc.gov.uk.

On receipt of a complete and valid application, we have a period of two months in which to determine it, but will aim to reach a decision as soon as possible within this timeframe. As part of the process we will consult various authorities including the Local Planning Authority, Highways Department, Environment Agency and Natural England where appropriate. Identifying and resolving possible problems before plans reach an advanced stage will minimise costs to all parties and will reduce the time taken to determine the application.

Once determined, we will notify the applicant of WBC's approval or refusal in writing along with a written copy of your consent or reason for refusal if applicable.

8 Design Guidance

Detailed design plans will need to be submitted with your consent application. An applicant should demonstrate that they have considered the environmental implications of all options, and preferably settle on the least environmentally damaging solution.

If no other alternative is feasible, any proposed culvert length should be as short as possible and the diameter as large as possible. Depending on local circumstances we will look for a minimum culvert diameter of 600mm.

Culverts must be designed so they do not cause a restriction to flow. They must not increase the risk of flooding or prevent maintenance of the adjacent open watercourse. Consideration must also be given to overland flow paths in the event of a culvert becoming obstructed or overloaded. It should be ensured that flows will not affect property or cause unreasonable nuisance or harm.

The responsibility for future maintenance and clearance of a culvert must be agreed and details of those responsible submitted with your application for consent. The responsibility for the maintenance of a culvert lies with the landowner or the person who owns the culvert unless otherwise arranged. Appropriate inlet and outlet structures should be provided in order to ensure smooth hydraulic transition and avoid erosion. Headwall arrangements at the upstream and downstream ends of a culvert should be suitably keyed into the bed and banks of the watercourse, and should be appropriate to the local environment.

Suitable access arrangements for maintenance should be included in the design. Access chambers must be provided at each change of direction if the

culverting is not straight. Other access/inspection chambers should be installed at suitable intervals.

Inlet and outlet screens should not be used unless absolutely necessary. An appropriate risk assessment must be submitted with your application to demonstrate when a trash screen is necessary, and a formal maintenance regime must be agreed prior to approval.

In most situations it is appropriate for the inverts of culverts to be set slightly below the existing bed level to allow for future maintenance or other works on the watercourse. It also aids the provision of a more “natural” bed to the culvert.

Multiple small culvert arrangements are prone to blockage by accumulation of waterborne debris at the inlet. Where multiple culverts are unavoidable, a minimum number of culverts should be used and cutwaters should be provided between pipes at the culvert inlet.

9 Environmental Considerations

Environmental mitigation measures may be appropriate if any open watercourse is being removed. We must also consider the key aims of the Water Framework Directive throughout the consenting processes. Overall this Directive aims to:

- prevent further deterioration and protect and enhance the status of aquatic ecosystems and associated wetlands;
- promote sustainable water consumption;
- progressively reduce or phase out discharges, emissions and losses of priority substances and priority hazardous substances;
- progressively reduce the pollution of groundwater; and contribute to mitigating the effect of droughts and floods.

Possible Environmental mitigation for larger culverts:

- Make the culvert slightly larger than that needed to accommodate the design flow and then position the invert of the culvert below the natural bed of the watercourse, to enable some more natural bed features to form.
- Provide ledges running through the culvert (approximately 500 mm wide and 300 mm above normal water level) to allow for the passage of mammals. Or make provision for appropriately located mammal underpasses close to the culvert.
- The height of the invert should not pose an obstruction to fish movement.
- Provide structures to encourage bat roosting and bird nesting as appropriate.

Environmental mitigation for smaller culverts:

- Propose suitable environmental enhancements, for example opening up a length of previously culverted watercourse elsewhere on the site, enhancing other lengths of the watercourse, creation of a pond/marshy area, scrub/hedge planting.
- Construct headwalls and wingwalls in ‘soft-engineering’ or natural materials in keeping with the natural channel.

10 Planning Considerations

The requirement for ordinary watercourse consent is independent of the need for planning permission and the granting of planning permission does not imply or guarantee that we will grant consent.

We would normally oppose planning consent and refuse ordinary watercourse consent on conservation grounds for a development which proposes a culvert where there are reasonable alternatives. Such alternative solutions might include a revised site layout or an ecologically acceptable diversion of an open channel.

Buildings should not be sited over the top of new or existing culverts. Building regulations (Approved Document H) stipulate the distance from which a watercourse or sewer should be laid from new foundations.

We would oppose planning consent for any building over a culvert as the culvert may, in the future, need to be repaired, replaced or up-rated if conditions in the catchment change. There is also the need to maintain an overland flow route if the culvert is blocked or its capacity exceeded.

Consent is also required for development within a specified distance of either side of a Main River in accordance with Environment Agency Byelaws.

11 Acronyms and Definitions

EA – Environment Agency

LPA – Local Planning Authority

WBC – Wokingham Borough Council

LLFA – Lead Local Flood Authority

FWMA – Flood and Water Management Act

LDA – Land Drainage Act

WFD – Water Framework Directive

Ordinary Watercourse - all rivers, streams, ditches, drains, cuts, dykes, sluices, sewers (other than public sewers) and other passages through which water flows that are not designated as main rivers.

Main River - all watercourses shown as such on the statutory main river maps held by the Environment Agency and Defra, as appropriate.

Bridge - an open span structure that carries a road, footpath, railway etc over a watercourse.

Culvert - a covered channel or pipeline which is used to continue a watercourse or drainage path under an artificial obstruction.

Wingwalls-a wing wall is a smaller wall attached or next to a larger wall or structure

Headwalls- a headwall is a small retaining wall placed at the outlet of a stormwater pipe or culvert.

Inverts- the invert level is the base interior level of a pipe, trench or tunnel.

Culverting watercourses policy

Internal Policy 169_19

Published: 24/08/2023

Audience: All Environment Agency staff, particularly those involved in designing, permitting or responding to works on watercourses.

This Internal Policy and the associated [LIT 16856 Culverting Watercourses guidance](#) should be used for internal works and be used to provide advice to local planning authorities, lead local flood authorities, internal drainage boards, drainage and highways authorities, developers, consultants, landowners and the general public.

Purpose

In implementing this Internal Policy we will:

- provide clarity with respect to culverting in a single statement for internal and external use;
 - demonstrate how we will take action to protect the continuity and integrity of watercourses;
 - recommend this approach to all drainage authorities in England and provide guidance for developers and landowners;
 - make staff aware of our position and ensure a nationally consistent approach to culverting.
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Policy Wording

We are opposed to the culverting of any watercourse because of the adverse ecological, flood risk, geomorphological, human safety and aesthetic impacts. Watercourses are important linear features of the landscape and should be maintained as continuous corridors to maximise their benefits to society.

We will normally object to proposals to build over existing culverts because of health and safety considerations, increased maintenance costs and complexities and because future options to restore the watercourse may be precluded. We will, where we deem appropriate, take possible cumulative impacts into account when making decisions.

We will actively pursue the restoration of culverted watercourses to open channels.

This Internal Policy and the associated [Guidance 170 19](#) should be complied with when developing Environment Agency projects, when assessing and determining Flood Risk Activity Permit applications, and when providing advice to local planning authorities on development proposals involving culverting.

Culverting permit and planning applications

Applicants will be expected to demonstrate why culverting is both necessary and the only reasonable and practicable alternative. Alternatives could include open span bridges, revisions to site layout or diversion of the watercourse. Where it has been robustly demonstrated that the culverting is both necessary and the only reasonable practicable alternative, the length of any culvert should be restricted to the minimum necessary to meet the applicant's objective.

Applicants should provide appropriate assessments to demonstrate that culverting will not increase flood risk elsewhere and will not result in an unacceptable impact on channel stability and the habitat(s) and species present. They should demonstrate that mitigation and compensation measures will be put in place to reduce or nullify any impacts to our satisfaction.

When designing the culvert, the applicant should take into account the predicted impacts of climate change (using an allowance for climate change), natural channel geomorphology and any future development planned in the catchment. All mitigation measures should be incorporated within the design and the work should be carried out using best working practice to minimise environmental impacts.

Culverting without permission

If a culvert is constructed (or altered) on a [main river](#) without permission, the Environment Agency may remove, alter or pull down the work and recover its expenses from the person who carried it out. Alternatively the Environment Agency could request the installer to remove or alter the culvert at their own expense.

If a culvert is constructed (or altered) on any watercourse in such a way which causes a breach of planning control, as defined in section 171A of the Town and Country Planning Act 1990, the local planning authority have a range of powers to take proportionate enforcement action in the public interest.

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Culverting Watercourses

Guidance: 170_19

Published: 10/06/2019

Audience: All Environment Agency staff, particularly those involved in designing, permitting or responding to works on watercourses.

This Guidance and the associated [Internal Policy 169_19](#) should be used to provide advice to local planning authorities, lead local flood authorities, internal drainage boards, drainage and highways authorities, developers, consultants, landowners and the general public.

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Why is guidance on culverting watercourses required?

Watercourses are valuable features of the landscape for people and wildlife. We have legal duties under the Environment Act 1995, the Water Environment (Water Framework Directive) Regulations 2017 and the Natural Environment and Rural Communities Act 2006 which aim to ensure that they are protected and enhanced for the benefit of present and future generations. Naturally functioning rivers and coasts provide vital benefits including; flood storage, sustainable natural flood management and increased resilience to drought and climate change. They also provide vital water resources and recreational assets for people, help drain agricultural and urban land, ameliorate urban heating and are the foundation for the diversity, coherence and connectivity of wildlife habitats.

The Flood and Water Management Act 2010 defines a culvert as “a covered channel or pipe which prevents the obstruction of a watercourse or drainage path by an artificial construction”.

Culverting works against the natural processes of watercourses. It can exacerbate the risk of flooding and increase maintenance cost and complexity. It can also destroy wildlife habitats, hinder fish passage, reduce amenity value, interrupt the continuity of the linear corridor of a watercourse and can affect channel stability. It can also significantly reduce resilience to the effects of drought, floods and pollution. We will therefore take this into account in our decision making.

This guidance provides the background information to support the Environment Agency [Internal Policy 169_19](#) on culverting watercourses.

What are the detrimental effects of culverting?

Detrimental effects of culverting watercourses can include:

- increased likelihood of flooding due to their limited capacity and propensity for blockage, both of which can result in obstructions to flow, and loss of floodwater storage;
- exacerbating the nature of flooding by increasing flow velocities and speed of onset;
- loss of and adverse effects on morphology, fisheries and wildlife habitat including substrate;
- if present, adverse effects on protected species;
- the creation of barriers to fish passage through increased water velocities, behavioural deterrent, shallow depths, darkness, oxygen depletion and eroded culvert entrances;
- increased geomorphological risk including changes to channel stability, river bank and bed erosion and increased deposition around the culverted sections;
- greater difficulties in providing for drainage connections;
- increased liabilities and costs due to the need to maintain, repair and replace culverts or to manage upstream and downstream risks;
- increased health and safety hazards, notably for workers clearing blockages and for children in urban areas;
- locally reduced groundwater recharge;
- increased difficulty in detecting the origins of pollution and in monitoring water quality;
- reduced resilience for communities and wildlife to the effects of extreme weather events, climate change and acute pollution.

What are the benefits of removing culverts?

In addition to avoiding the detrimental effects of new culverting listed above, the restoration of river corridors by removing or opening sections of existing culverting and restoring natural river beds and banks can have wider benefits, including:

- providing habitat for wildlife and improving its connectivity;
 - providing additional flood storage capacity and slowing flows;
 - ameliorating the urban heat island effect;
 - providing areas for recreational use;
 - improving amenity, health and educational opportunities;
 - increasing property prices and their desirability;
 - reducing maintenance costs and improving safety.
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What is the legal framework?

Any culverting of a watercourse, or the alteration of an existing culvert:

- on [main rivers](#), requires a [flood risk activity permit](#) from the Environment Agency under the Environmental Permitting Regulations 2016. Conditions can be imposed on such permits.
- on all other watercourses, except within the district of an internal drainage board (IDB), requires a land drainage consent under Section 23 of the Land Drainage Act 1991 from the Lead Local Flood Authority (LLFA).
- in an IDB district, is likely to require the consent of the IDB under the Land Drainage Act 1991.
- Highway authorities are also required under Section 339 Highways Act 1980 to seek the consent of the drainage authority before carrying out any works affecting a watercourse.

The Environmental Permitting Regulations 2016: Flood Risk Activities states, in paragraph 5 of Part 1 of Schedule 25, that the Environment Agency must exercise its relevant functions for the purposes of achieving the following objectives -

- (a) managing flood risk;
- (b) managing impacts on land drainage;
- (c) environmental protection.

Planning permission under the Town and Country Planning Act 1990 is also likely to be required.

In determining or advising on the above permits, consents or relevant planning applications, The Environment Agency must:

- secure compliance with the WFD.

Other relevant public bodies have a duty to:

- have regard to the relevant River Basin Management Plan.
 - have regard to the purpose of conserving biodiversity.
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What is the Environment Agency role in permitting and planning?

We have a direct regulatory role under the Environmental Permitting Regulations in relation to the culverting of [main rivers](#) and we have an advisory role on planning applications as a statutory consultee where proposals are in proximity to [main rivers](#). We are not however a statutory consultee purely because proposals are in proximity to ordinary watercourses, but we will often be consulted in these cases as such proposals often lie within Flood Zones 2 or 3, for which we are a statutory consultee.

We also have an advisory role as a statutory consultee on the preparation of Local Plans, Spatial Development Strategies and their associated Strategic Environmental Assessments, so have the opportunity to influence policies and land allocations in relation to culverting. We also have a strategic overview role for all sources of flooding.

How will we consider environmental permit applications for culverting?

We will consider each environmental permit application to culvert or extension of a culvert on a [main river](#) on its own merits and in accordance with our risk-based approach to permitting. We will normally only grant such a permit application if there is no reasonably practicable alternative, and we think the detrimental effects would be so minor that a more costly alternative would not be justified or there are reasons of overriding public or economic interest. In all cases where we believe it to be necessary, applicants should provide measures based on applying a hierarchy:

- Acceptable avoidance measures.
- Where this is not possible, the appropriate mitigation.
- Where this is not possible, the appropriate compensation measures

Applicants should also robustly secure the responsibility for future maintenance and public safety liability.

The cumulative impact of any culvert proposal will be taken into consideration if other culverts are pre-existing on the same watercourse or if a precedent may be set which could result in unacceptable damage.

We will be unlikely to grant permit applications for proposals to build over existing [main river](#) culverts because of health and safety considerations, increased maintenance costs and complexities, and because future options to restore the watercourse may be precluded.

How will we consider planning applications involving culverting?

The Environment Agency is a statutory consultee for planning applications on land in or within 20m a [main river](#) or land in flood zone 3 or 2 under Schedule 4 to the Town and Country Planning (Development Management Procedure) Order 2015. Therefore, we will normally be consulted by local planning authorities for advice on development proposals which include new culverting or built development on top of existing culverts.

We will consider such development proposals on their own merits and provide advice in the context of the planning policies and guidance relevant at the time. We will only support such planning applications if there is no reasonably practicable alternative, and we think the detrimental effects would be so minor that a more costly alternative would not be justified or there are reasons of overriding public or economic interest. In all cases where we believe it to be necessary, applicants will also be expected to accept sole ownership and responsibility for future maintenance and public safety liability. Planning conditions or obligations should be used to ensure any necessary measures, including future maintenance, are robustly secured.

Where such culverting is proposed on an ordinary watercourse, we will work with the relevant Lead Local Flood Authority or Internal Drainage Board to ensure our respective advice is aligned.

We are unlikely to support planning applications for proposals to build over existing [main river](#) culverts because of health and safety considerations, increased maintenance costs and complexities, and because future options to restore the watercourse may be precluded.

Where development proposals present opportunities for the restoration of culverted watercourses to open channels, we will actively pursue this through our statutory consultee role, provided doing so would not increase flood risk elsewhere or cause other unacceptable environmental impacts.

Opening up culverts can also help developers meet wider planning policy objectives such as to achieve environmental and biodiversity net gains, and create and strengthen networks of multifunctional green infrastructure.

Our ability to provide bespoke advice across the full range of potential issues associated with culverting, will always be subject to the prioritisation applied by any external or internal screening tools or standing advice, valid at the time.

We should also provide this advice, where appropriate, when consulted for pre-application advice.

How will we respond to spatial planning policy consultations?

Planning policy requires new development and spatial plans to ensure proposed new development is safe from flooding and does not increase flood risk elsewhere, taking climate change into account. It also encourages use of opportunities provided by new development to reduce the causes and impacts of flooding, including natural flood management techniques. It is also a requirement to recognise the wider benefits from natural capital and ecosystem services and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries; this could include the opening of culverts.

The Environment Agency is also a statutory consultee for strategic planning documents including Spatial Development Strategies, Local Plans and Neighbourhood Plans, including their associated Strategic Environmental Assessments (SEA) and Sustainability Appraisals. We are also often consulted on related evidence base and background documents such as Strategic Flood Risk Assessments and Water Cycle Studies.

When we are consulted on such strategic planning documents, their associated SEA and Sustainability Appraisals and on relevant evidence base and background documents we should take the opportunity to:

- Advocate for planning policies and allocations which resist proposals for new culverting
- Advocate for planning policies and allocations which encourage the restoration of culverted watercourses to open channels
- Advise when it is unlikely a permit will be granted for any new culverting, culvert extension or development on top of existing culverting on [main rivers](#)
- Advise on compliance with River Basin Management Plan objectives including the Water Framework Directive 'no deterioration' objective
- Explain the detrimental effects of culverting and the benefits of removing culverts

How will we manage the interface between permitting and planning?

For developments that require both planning permission and an environmental permit, the focus of planning decisions should be on whether the proposed development is an acceptable use of the land. Planning permissions should not duplicate controls that are subject to separate regulatory regimes. Whilst the two regimes are legally separate, in order to prevent conflict between the two regimes, we should look to identify any issues which may be material to the granting of either application and provide a substantive planning response so that it may be considered during the application assessment. We should look to avoid situations where planning permission is granted but we then refuse a permit application, causing the applicant to have to apply for a new planning permission. Similarly, if a permit is applied for and granted first, we should not be raising objections at planning applications stage, on issues which have already been considered as part of the permit determination.

Local Planning Authorities will assume that the regulatory regime will operate effectively, however, they will need to know the scope of matters a permit can control. Where such measures to control impacts could have implications for planning, such as building location, layout, design or scale, we should recommend that applicants parallel track their permit and planning applications to allow all issues to be considered together. However, we cannot insist on this.

We may be asked by the Local Planning Authority whether we see any impediment to being able to grant an environmental permit application. We should be cautious in our planning responses and make sure we are not seen to pre-determine a permit application. We will need to consider any permit application on its own merits and will need to follow due process in assessing and determining any such application.

How does culverting impact on delivering the Water Framework Directive and the 25 Year Environment Plan?

Water Framework Directive

[The Water Environment \(Water Framework Directive\) \(England and Wales\) Regulations 2017](#) (WFD regulations) applies to surface waters (including some coastal waters) and groundwater (water in underground rock). These regulations set out requirements, to prevent deterioration of aquatic ecosystems and protect, enhance and restore water bodies to 'good' status.

Culverting can result in adverse impacts on water bodies, which could instigate their deterioration or prevent their achievement of good status (or potential, for artificial and heavily modified water bodies) under the WFD regulations.

Under the WFD regulations the Environment Agency must exercise its functions so as to secure compliance with the requirements of the WFD. We can therefore only grant a permit for a culvert if it meets the requirements of the WFD (including the Article 4.7 exemption).

Applicants should assess the impact of proposed culverts on water bodies and the objectives in the relevant River Basin Management Plan. If culverting results in deterioration of the WFD water body status or prevents it from meeting 'good' status, the applicant will have to demonstrate the development meets the requirements of Article 4.7 of the Water Framework Directive as transposed by the WFD regulations. Further guidance can be found in 'Guiding principles to follow when considering exemptions under Article 4.7 of the Water Framework Directive'

25 Year Environment Plan

The government's 25 Year Environment Plan (25YEP) has a target of improving at least three quarters of our waters to be close to their natural state as soon as is practicable. Physical modification, which includes culverting, is the top pressure affecting England's water environment preventing the achievement of Water Framework Directive objectives. The Culverting Watercourses [Internal Policy 169_19](#) is a key document in helping deliver for both the 25YEP and Water Framework Directive drivers.

Other Environmental Considerations

Some habitats and species which may or may not be designated are more valuable or more vulnerable than others. For example habitats of principal importance under NERC require more scrutiny due to their value. Rivers, such as chalk rivers, are particularly vulnerable to disruption by culverts. More than ever, it is vital to get expert advice on these from FBG when dealing with culverts so that a reasonable decision on culverting can be taken based on the merits of each case.

What other documents relate to this guidance?

[CIRIA Culvert, Screen and Outfall Manual](#)

[Flood and Water Management Act 2010](#)

[The Environmental Permitting Regulations 2016](#)

[Owning a watercourse](#)

[The River Restoration Centre](#)

[Natural Environment and Rural Communities Act 2006](#)

[Land Drainage Act 1991](#)

[Environment Act 1995](#)

[634 08 Flood and Coastal Risk Management – conserving, enhancing and restoring biodiversity](#)

[325 07 Conservation screening: taking nature conservation into account for permits, consents, licences and our works](#)

[196 07 Fulfilling our duties for nature conservation: summary of legal requirements for functions to screen activities and applications](#)

[Association of Drainage Authorities](#)

[Guiding principles to follow when considering exemptions under Article 4.7 of the Water Framework Directive](#)

[488 10 Protecting and improving the water environment - Water Framework Directive compliance of physical works in rivers](#)

[1340 16 Supporting implementation of river basin management plans](#)

[1340 16 SD01 Implementation of the river basin management plans position statement](#)

[659 16 Flood risk assessments: climate change allowances - guidance for Sustainable Places and Partnerships and Strategic Overview teams](#)