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Sustainable Drainage Systems Maintenance Plan

for

Borde Hill Estate, Haywards Heath.

E9459

DOCUMENT CONTROL SHEET

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FOR AND ON BEHALF OF STEPHEN WILSON PARTNERSHIP

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1 INTRODUCTION

1.1 Introduction

- 1.1.1 This statement details the drainage strategy and maintenance requirements for the proposed surface and foul water systems at the development above. A copy of this statement should be provided to the party responsible for maintaining the drainage system and should also be included within the Maintenance Manuals for the development.
- 1.1.2 The maintenance detailed in this document must be undertaken throughout the lifetime of the development. Failure to undertake this maintenance may result in the drainage system not operating as designed, increasing the risk of flooding.
- 1.1.3 The drawing detailing the strategy of the drainage system are referenced in the latest version of E9459 1101-1104.

1.2 Terms of Reference

- 1.2.1 Sustainable Drainage Systems (SuDS) are a sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than what has been the conventional practice. SuDS are designed to mimic natural drainage flows and typically manage rainfall close to where it falls. Benefits include the effective management of runoff from hard standing surfaces, such as pavements and driveways, by reducing the volume, frequency, and flow rate of surface water runoff during extreme storm events. They provide protection and/or enhancement of water quality (reducing pollution from runoff), are sympathetic to the environment and the needs of the local community and provide an attractive habitat for wildlife in urban locations.
- 1.2.2 The purpose of this management plan is to demonstrate how SuDS, which have been implemented at this particular residential development, will be maintained in compliance with various requirements and best practice guidance, including but not limited to, the National Planning Policy Framework (NPPF) and SuDS Manual (CIRIA, 2015).
- 1.2.3 The maintenance plan aims to:
- Summarise the surface and foul water drainage strategy
 - Summarise the various SuDS features used within the site;
 - Establish who is responsible for the maintenance of the drainage including the SuDS components;
 - Set out how to maintain the incorporated components following construction;
 - Ensure that all those involved in the maintenance and operation of the SuDS understand their functionality and maintenance requirements in terms of supporting long-term performance.

Maintenance inspections should be recorded in Appendix 1.0 of this report to ensure that the document stays up to date.

2 DRAINAGE STRATEGY

2.1 Surface Water Drainage Strategy

- 2.1.1 The Site is underlain with by Weald Clay Formation. Weald Clay is known for its poor soakage characteristics. The use of infiltration as a method of surface discharge is therefore not feasible.
- 2.1.2 It is proposed to attenuate the surface water in an attenuation basin before gradually releasing the surface water run-off at a controlled rate. The discharge rate will be limited to mimic the existing greenfield runoff rate for the QBar event.
- 2.1.3 Runoff from the roofs will discharge via downpipes initially into rainwater butts, which will be fitted with an overflow facility. Runoff not stored within the rainwater butts will be discharged unrestricted to the swale network using shallow pipes. Destination of the surface water drainage will be to the existing surface water ditch at the south-eastern corner of the Site.
- 2.1.4 To limit disruption to the natural wildlife, surface water will be conveyed downstream using a network of shallow swales. Initially, the swales, which will be either open grass lined or filled with pea shingle and a perforated pipe, will discharge to the existing pond.
- 2.1.5 A weir will be installed at the low point on the pond with the crest level set at the existing maximum winter water level of the pond, this will ensure any additional flows created by the development do not impact on the existing pond and wildlife. Downstream of the weir the existing ditch network will be remodelled to improve the flow of water to the existing culvert under the grass track and will be discharged into the new attenuation basin.
- 2.1.6 In accordance with Planning Condition 5 and comments from Mid Sussex DC Flood Team, the discharge rate will be limited to 0.8l/s (equivalent to the Qbar rate of drained catchments) using a an orifice flow control.
- 2.1.7 Whilst discharging as described above the balance of surface water runoff will be attenuated in the attenuation basin and provides adequate storage to include all storms up to and including the 1:100yr storm event plus 45% climate change allowance without flooding.
- 2.1.8 Finally, the restricted surface water flows will be discharged to the running stream to the west of the Development Site, whereupon a flap valve will be installed at the outlet.
- 2.1.9 In the event that the stream is surcharged/ flooded, and the flap valve will be forced shut surface water will back up into the proposed drainage system and into the attenuation basin. If the volume of water exceeds the freeboard provided within the basin design, then exceedance flows will overtop the low crest of the pond to the north. The natural topography of the land will direct flows to the dry ditch to the north and onwards to the existing stream.
- 2.1.10 All new connections to the existing ditch shall be subject to ordinary watercourse consent with the Local Authority.

2.2 Foul Water Drainage Strategy

- 2.2.1 The opportunities for discharging foul effluent from the site have also been considered and the appraisal demonstrates that the most viable solution is to connect into a new package treatment system, which will discharge via the existing ditch to the west of the Site.
- 2.2.2 The receiving stream remain wet all year round and has a constant flow.
- 2.2.3 The wastewater treatment plant will be able to meet all the general bindings rules set by the Environment Agency (EA), which means no communications with the EA are required on this occasion.
- 2.2.4 All new connections to the existing ditch shall be subject to ordinary watercourse consent with the Local Authority.

3 MAINTENANCE REQUIREMENTS

3.1 General

- 3.1.1 Only trained personnel will be permitted to undertake maintenance of SuDS features and drainage where responsibility lies with Private Management Companies. This work must be carried out in accordance with the Confined Space Regulations. To facilitate this maintenance, manholes, inspection chambers and other apparatus are located, where they are reasonably accessible.

3.2 Maintenance Responsibility

- 3.2.1 All private drainage within the site boundary will be the responsibility of a private management company.
- 3.2.2 The details of the private management will be provided.

3.3 Maintenance Requirements

- 3.3.1 Whilst the drainage system has been designed to operate with as little maintenance as possible, there are key operations that must regularly be undertaken to ensure that it remains in optimal condition, most of which are general housekeeping tasks that should be undertaken for any drainage system, but with additional attention to the catchpits and downstream defenders upstream of the soakaways. These operations are summarised below together with recommended frequencies:
- 3.3.2 Periodic desilting of catchpits, downstream defender, gully sumps, channel drains and threshold drains. These should be emptied at least as follows (but with an annual inspection and additional cleansing if required): On completion of drainage works, Year 1, Year 3, then every 5 years. The desilting of these items is required to allow the underground geocellular soakaways to operate as per the design, and do not become blocked.
- 3.3.3 Periodic jetting or rodding of pipework as required to clear blockages.
- 3.3.4 Gratings on any gullies and threshold drains to be kept clear of debris.
- 3.3.5 The drainage components beneath external areas (under landscaping, hard surfacing, and car parking) will be easily accessible for maintenance purposes.
- 3.3.6 Ease of access for maintenance and inspection is essential; the manhole lids will be kept as lightweight as practicable. Frequent street sweeping in the catchment areas of catchpits and downstream defenders will increase the time interval in which the system has to be cleaned out.
- 3.3.7 The proposed catchpits are essentially sump manholes where the outlet pipe is set at a level above the inlet pipe, allowing some removal of sediments, floating debris, oil and grease from surface water. The sump in the catchpits will be cleaned out using a conventional sump vacuum cleaner. In most situations, the units should be cleaned out at least annually.
- 3.3.8 The following maintenance regime would be recommended as a minimum, but actions and frequencies should be adjusted to suit the specific requirements of this development. However, the previous discussed, component specific regimes and any manufacturer's specific recommendations should always be followed.

Maintenance Schedule	Required Works/Action	Frequency
Routine Maintenance	Inspect and identify incorrect operation. Debris removal from catchment area using sweeping and vacuuming. Removal of sediment from pre-treatment components i.e catchpits, downstream defenders.	Monthly 3 Monthly Annually

Table 3.1 - Recommended Maintenance Requirements

3.4 Pipe Network

- 3.4.1 All pipe work will be visually inspected at least once a month for the first three months after installation and then a minimum of once year.
- 3.4.2 Flushing of the system can be achieved using a jetting system with a 150 bar pump pressure (ie. approximately 80 bar at the nozzle) at a discharge flow of 300 l/min. The jet nozzle should be introduced to the system via the Inspection manhole and the integral inspection / maintenance tunnel.

Any silt & debris should be flushed to the inspection or catchpit manhole and removed in accordance with the Management Company policy for waste management.

Below Ground Pipe Network Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Remove sediment from pre-treatment inlet structures and inspection chambers.	Annually or as required
	Maintain vegetation to designed limits within the vicinity of below ground drainage pipes and tanks to avoid damage to system.	Annually, or as required
Remedial actions	Repair physical damage if necessary	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms
	Survey inside of tank for sediments build-up and remove if necessary	Every 5 years or as required

3.5 Attenuation Basin

- 3.5.1 Attenuation Basins are landscaped depressions that are normally dry except during and immediately following storm events. They can be on-line components where surface runoff from regular events is routed through the basin and when the flows rise, because the outlet is restricted, the basin fills and provides storage of runoff and flow attenuation. They can also be off-line components into which runoff is diverted once flows reach a specified threshold.
- 3.5.2 The schedule below provides guidance on the type of operational and maintenance requirements that may be appropriate, the list of actions is exhaustive, and some actions may not always be required.

Attenuation Basin Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove Litter and debris	Monthly
	Cut the grass – for spillways and access routes	Monthly (during growing season), or as required
	Cut the grass – meadow grass in and around basin	Half yearly (spring - before nesting season, and autumn)
	Manage other vegetation and remove nuisance plants	Monthly (at start; then as required)
	Inspect inlets, outlets and overflows for blockages, and clear if required	Monthly
	Inspect banksides, structures, pipework etc for evidence of physical damage	Monthly
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Monthly (for first year), then annually or as required
	Check any penstocks and other mechanical devices	Annually
	Tidy all dead growth before start of growing season	Annually
	Remove sediment from inlets, outlet and forebay	Annually (or as required)
	Manage wetland plants in outlet pool – where provided	Annually
Occasional Maintenance	Reseed areas of poor vegetation growth,	As required
	Prune and trim any trees and remove cuttings	Every 2 years, or as required

	Remove sediment from inlets, outlets, forebay and main basin when required	Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial Actions	Repair erosion or other damage by re-turfing or reseeded	As required
	Realignment of rip-rap	As required
	Repair/rehabilitation of inlets, outlets and overflows	As required
	Relevel uneven surfaces and reinstate	As required
	Remove and dispose of oils or petrol residues using safe standard practices	As required

3.6 Orifice Flow Control

- 3.6.1 The chamber containing the orifice plate flow control requires inspections once every 3-6 months. It may be necessary to increase frequency dependant on findings during the first year post construction.
- 3.6.2 Any blockage should be cleared from the outlets during each inspection. If this requires man entry, ensure to use confined space trained staff.
- 3.6.3 An orifice plate has no moving parts and no power requirements and provides reliable, low-maintenance, engineered flood management as part of green infrastructure developments.
- 3.6.4 Periodic desilting of the chamber sump should be carried out as part of the normal maintenance programme.
- 3.6.5 Specific manufacturers guidance should take precedence over the contents of this maintenance plan.

3.1 Headwall

- 3.1.1 A new headwall will be constructed on the existing watercourse. The headwall will discharge the surface water from the site.

Headwall Maintenance schedule	Required action	Typical frequency
Regular inspections	Inspect outlet for blockages. Clear if required.	Quarterly
	Check headwall for any evidence of physical damage	Annually
	Check around headwall for signs of scour or wash out	Quarterly
Regular maintenance	Remove sediment, litter, and debris build-up	Quarterly to biannually
Remedial actions	Remedial measures to reduce scour	As required

3.2 Swales

- 3.2.1 Swales are a shallow vegetated channel designed to store, convey and act as a method of filtration for surface water run-off.
- 3.2.2 The schedule below provides guidance on the type of operational and maintenance requirements that may be appropriate, the list of actions is exhaustive, and some actions may not always be required.

Swales Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove Litter and debris	Monthly, or as required
	Cut grass – to retain grass height within specified design range	Monthly (during growing season), or as required
	Manage other vegetation and remove nuisance plants	Monthly at start; then as required
	Inspect inlets, outlets, and overflows for blockages, and clear if required	Monthly
	Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponded for >48 hours	Monthly, or when required
	Inspect Vegetation coverage	Monthly for 6 months, quarterly for 2 years, then half yearly
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Half yearly
Occasional Maintenance	Reseed areas of poor vegetation growth, alter plant types to suit conditions, if required	As required, or if bare soil is exposed over 10% or more of the swale treatment area
Remedial Actions	Repair erosion or other damage by re-turfing or reseeding	As required
	Relevel uneven surfaces and reinstate design levels	As required

	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required
	Remove and dispose of oils or petrol residues using safe standard practices	As required

3.3 Wastewater Treatment Plant

- 3.3.1 Treatment plant maintenance to be carried out in strict accordance to the manufacturer's specific maintenance guidance/ instructions.

3.4 Riparian Responsibilities

- 3.4.1 A watercourse runs along the south-western boundary of the site. The management company will be responsible for the upkeep of the watercourse.
- 3.4.2 Local Council guidance regarding riparian ownership can found at the following website:
<https://www.eastsussex.gov.uk/environment/flooding/riparian-ownership#:~:text=As%20a%20riparian%20owner%20you,piped%20or%20culverted%20in%20sections>
- 3.4.3 Appendix 2 contains the current guidance from the Environment Agency on the maintenance responsibilities and good practice.

3.5 Accidental Spillages

- 3.5.1 It is not envisaged that any materials are to be stored onsite once the development is completed, which could cause major spills and potential pollution issues within the drainage system. If this situation alters in the future a specialist will be required to be contacted to confirm if any upgrades to the existing system are required.
- 3.5.2 Minor spillages of fuels and oils from motor vehicles will be dealt with by the permeable paving and deep trapped gullies, by biodegrading / collecting the hydrocarbons respectively.

4 DRAINAGE CONSTRUCTION ENVIRONMENTAL MANAGEMENT STRATEGY

4.1 General

- 4.1.1 The Principal Contractor and any sub-contractors will be required to conduct their activities in accordance with the relevant EA PPG guidance, in order to prevent pollution by potential contaminants. An inventory of potential pollution sources associated with the construction process and details regarding the management of these sources will be documented by the Principal Contractor and updated as construction progresses if new potential pollution sources are identified. Contaminants associated with construction may be:

- Chemical: such as fuels, oils, lubricants, surfactants and other cleaning chemicals, and flocculants; or
- Physical: such as dust and other airborne particulates, silts and sediments.

4.2 Materials Storage

- 4.2.1 Potential sources and pathways of pollution from residential construction works may include:

- Direct disturbance of the banks and bed of channels during watercourse crossing construction, repair and/or upgrade works;
- Dust, peat disturbance and spoil management on site;
- Pumping of standing water required for de-watering of excavations such as manholes, pipe runs etc, or as required for drainage management purposes;
- Run-off entering watercourses from:
 - Exposed ground, excavations and material stockpiles (aggregate and excavated/overburden peat and soil), tracks and haul routes;
 - Tracks and culverts at watercourse crossings;
- Cement and cement wash where cement grout or concrete is being applied;
- Plant washing and vehicle wheel-wash areas;
- Fuel and chemical storage/refuelling areas;
- Leaking/vandalised plant and equipment; and
- Sewage and wastewater from the temporary construction compound.

4.3 Fuel & Other Chemicals

- 4.3.1 There is potential for spillages of hydrocarbons and other chemicals that could potentially migrate to surface water or groundwater and adversely affect water quality. Spillages could be associated with delivery vehicles and mechanised construction plant or from any areas where fuels or other materials are temporarily stored on the Site. To reduce the likelihood of contaminants impacting migrating to surface or groundwater, hydrocarbons and other chemicals such as fuels will be located away from sensitive environment receptors such as surface watercourses and will be stored appropriately:

- The storage of potentially polluting materials will be kept to a minimum and, where less hazardous or inert materials are reasonably available, these will be specified;

- Any obvious potential pollutant sources such as mobile plant, materials storage, and temporary waste storage facilities will be located away from watercourses and where practicable, operation of construction plant will observe a buffer distance from watercourses (tbc);
- All fuels, oils and potential contaminants, as well as waste oils, will be stored within the construction compounds in secure, fit for purpose containers within bunded containment as appropriate and in accordance with the latest Government guidance (available at <https://www.gov.uk/oil-storage-regulations-and-safety/business>). The bunded containment shall have a capacity of 110% of the volume to be stored and will have impervious, secured walls and base. There shall be no fuel storage outside the construction compound;
- All materials stored within the Site will be checked regularly for containment integrity, quantity stored and security of storage;
- Generally, re-fuelling and maintenance of mobile plant and machinery will be carried out at a designated location within the construction compound only, at a dedicated impermeable refuelling pad. The pad will be bunded and equipped with a collection sump. Refuelling will be carried out using an approved mobile fuel bowser with a suitable pump and hose.
- Drip trays will be mandatory beneath all stationary construction vehicles and spill kits, absorbent mats and absorbent sands will be available on Site and will be deployed to contain drips and small spillages and all relevant staff will be trained in their appropriate use. Any spills will be cleaned up as soon as possible with any contaminated sands bagged up and disposed of correctly;
- The wheel-washing facility will also comprise an impermeable bunded area enabling wash water to be collected and stored to prevent runoff of polluted water to down gradient watercourses. This will also ensure that mud and debris from the Site is not transferred to roads outside the site boundary and potentially polluting substances such as fuels, oils and other chemicals are captured. The water will either be treated and tested prior to discharge. The method of disposal of all waste water will be agreed with the EA and or the local authority prior to construction commencing; and
- All vehicles on site will be fitted with oil spill kits. In addition, all vehicles delivering hydrocarbons to site will be fitted with oil spill kits and will ensure that sand trays are placed below any oil or fuel filling activities. Spare oil spill kits will be held in the site office at all times. watercourses and where practicable, operation of construction plant will observe a buffer distance from watercourses (tbc);

4.4 Physical Risks

- 4.4.1 To limit potential pollution impacts from either hardcore and/or excavated material entering watercourses, or increased sediment levels within surface water runoff, the principle contractor will be required to adhere to the following measures and controls as a minimum:
- Any excavated soil or peat that will be used in the construction of access tracks (e.g. to dress the sides of the tracks once backfilled) are to be temporarily placed on the furthest side away from any identified watercourse or drain;

- The provision of buffer strips around watercourses or drainage channels on sections of track adjacent to watercourse crossings;
- Procedures during excavations and soil handling for both routine working and during any environmental emergencies to control and mitigate both erosion and dust generation; and
- All areas of stockpiled arisings should be inspected by the Principal Contractor at maximum one week intervals and following heavy rainfall or thaw conditions.

4.5 Foul Water

- 4.5.1 Foul water from the on Site facilities at the construction works compound will be removed from Site by an appropriately licensed contractor.

5 CONTACT DETAILS AND RECORD OF MAINTENANCE

5.1 Contact Details of Individual/Individuals Responsible for This Plan

5.1.1 In the event of concern over any matter related to drainage, please contact:

Name:.....

Address:.....

.....

.....

Phone:.....

Email:.....

5.2 Record of Maintenance and Photographic Evidence

5.2.1 Please provide a record of all inspections (including all photographic evidence) in Appendix

APPENDIX 1.0 – RECORD OF MAINTENANCE

RECORD OF MAINTENANCE

GENERAL INFORMATION			
Site ID	Borde Hill Estate, Haywards Heath		
Site Address/ Location	Borde Hill Estate, Haywards Heath		
Elements forming the SuDS scheme	Attenuation basin, catchpits, swales,	Inspection frequency	As Required
Type of development	Holiday/ Leisure	Approved Drawing Ref(s)	E9459 1101-1104

	Inspection date				Inspection date			
	Details	Y/N	Action required	Date completed	Details	Y/N	Action required	Date completed
GENERAL INSPECTION ITEMS								
Are covers/ fittings correctly secured.								
If no, state location and problem.								
Cause								
	Details	Y/N	Action required	Date completed	Details	Y/N	Action required	Date completed

SILT/ SEDIMENT ACCUMULATION								
Is there accumulation at inlets (or other defined accumulation zones such as the gullies, threshold drains, catchpits) If yes, state location, depth (mm) and extent. Is removal required? If yes, state waste disposal requirements and confirm all waste management requirements have been complied with (consult EA or SEPA).								
SYSTEM BLOCKAGES/ LITTER BUILD UP								
Is there evidence of litter accumulation in the system? If yes, is this a blockage risk?								

	Details	Y/N	Action required	Date completed	Details	Y/N	Action required	Date completed
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OTHER OBSERVATIONS								
INFORMATION APPENDED (Photos etc.)								

APPENDIX 2.0 – ENVIRONMENT AGENCY WATERCOURSE MAINTENANCE

living on the edges



A guide to your rights
and responsibilities of
riverside ownership

We are the Environment Agency. It's our job to look after your environment and make it **a better place** – for you, and for future generations.

Your environment is the air you breathe, the water you drink and the ground you walk on. Working with business, Government and society as a whole, we are making your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

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Watercourses enhance our lives in so many ways and yet they can also pose a threat when in flood. They need to be respected, protected and improved for our benefit and for future generations. That is why there is a significant amount of legal safeguards that we all need to comply with.



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1 Introduction

If you own land or property next to a river, stream or ditch you are a ‘riparian landowner’ and this guide is for you. It has been updated with new information on who to contact for guidance on watercourses.

Your rights as a riparian landowner have been established in common law for many years, but they may be affected by other laws. You may need permission for some activities from a third party, such as your local authority (unitary, county or district council), Internal Drainage Board or the Environment Agency. These organisations are known as **risk management authorities**, and their role is described in Appendices 1 and 2.



This guide explains:

- your rights and responsibilities as a riparian landowner. It also explains the roles of your risk management authority and other organisations you may need to work with.
- who is responsible for flood risk management and flood defences, and what that means in practice.
- how you can work with your risk management authority and other organisations to protect and improve the natural environment of our rivers and streams.

Your risk management authority has powers and responsibilities to manage flood risk and work with others to improve the river environment in England and Wales.

A watercourse is any natural or artificial channel above or below ground through which water flows, such as a river, brook, beck, ditch,

mill stream or culvert.

Your risk management authority can give you advice and guidance on managing your watercourse. However, depending on the situation, they will not approve or consent to work that would harm the environment or increase flood risk, even if the works are structurally sound. They will discourage culverting, diverting or channelling watercourses and building into watercourses, known as encroachment. They will promote ‘soft engineering’ methods to control erosion (see section 12).

If you are not sure who to contact please visit the Environment Agency website: www.gov.uk/environment-agency or call 03708 506 506.

For help and information during a flood call Floodline on 0345 988 1188.

2 Your rights and responsibilities

If you own land adjoining, above or with a watercourse running through it, you have certain rights and responsibilities. In legal terms you are a ‘riparian owner’. If you rent the land, you should agree with the owner who will manage these rights and responsibilities.





Your rights

- If your land boundary is next to a watercourse it is assumed you own the land up to the centre of the watercourse, unless it is owned by someone else.
 - If a watercourse runs alongside your garden wall or hedge you should check your property deeds to see if the wall or hedge marks your boundary. If the watercourse marks the boundary, it is assumed you own the land up to the centre of the watercourse.
 - If you own land with a watercourse running through or underneath it, it is assumed you own the stretch of watercourse that runs through your land.
 - Occasionally a watercourse, especially an artificial one, will be the responsibility of a third party. This should be noted in your deeds.
 - Water should flow onto or under your land in its natural quantity and quality. This means that water should not be taken out of a watercourse if it could lead to a lack of water for those who need it downstream. It also means that a person cannot carry out activities that could lead to pollution of the water and therefore reduce the natural water quality within a watercourse. More information on the permissions required to abstract water from a watercourse (section 7) and what to do if you spot pollution in your local watercourse is included in this booklet.
 - You have the right to protect your property from flooding, and your land from erosion. However, you must get your plans agreed with the risk management authority before you start work (see section 5).
 - You usually have the right to fish in your watercourse using a legal method. Anyone aged 12 or over must have a valid Environment Agency rod licence. It is important to check what your rights are, because fishing rights can be sold or leased.
- These rights are affected by your duty to other riparian landowners, the community and the environment.**

Your responsibilities

- You must let water flow through your land without any obstruction, pollution or diversion which affects the rights of others. Others also have the right to receive water in its natural quantity and quality as explained in the Your Rights Section. You should be aware that all riparian owners have the same rights and responsibilities.
- You must accept flood flows through your land, even if these are caused by inadequate capacity downstream. A landowner has no duty in common law to improve the drainage capacity of a watercourse he/she owns.
- You should keep the banks clear of anything that could cause an obstruction and increase flood risk, either on your land or downstream if it is washed away. You are responsible for maintaining the bed and banks of the watercourse and the trees and shrubs growing on the banks. You should also clear any litter and animal carcasses from the channel and banks, even if they did not come from your land. You may need your risk management authority's consent for these works (see section 5). Your local authority can advise you on the removal of animal carcasses.
- You should always leave a development-free edge on the banks next to a watercourse. This allows for easy access to the watercourse in case any maintenance or inspection is required. In some areas local byelaws exist which explain what you can and cannot do within certain distances of a watercourse. For more information on works near watercourses you should contact your risk management authority.
- You must keep any structures, such as culverts, trash screens, weirs and mill gates, clear of debris. Discuss the maintenance of flood defences, such as walls and embankments, on your property with your risk management authority. They may be vital for flood protection.
- You should not cause obstructions, temporary or permanent, that would stop fish passing through.
- You have a legal obligation to notify the Environment Agency and the relevant risk management authority if you would like to build or alter a structure that acts as an obstruction to a watercourse. Under the Eel Regulations in some cases it may be an offence if you do not notify the

Environment Agency of the above.

- Please help to protect water quality. Do not use riverbanks to dispose of garden or other waste, where it could be washed into the river. This includes grass cuttings, which pollute the water.
- You are responsible for protecting your property from water that seeps through natural or artificial banks. Where this damages a flood defence, your risk management authority may require you to pay for repairs.
- You must control invasive alien species such as Japanese knotweed. Your local risk management authority can advise you on how to manage and control these species.
- Make sure any work you do on a watercourse fits with the natural river system. Work must not damage wildlife and wherever possible you should try and improve the habitat. Speak to the relevant risk management authority about wildlife and

nature conservation.

If you are not sure what you have to do and/or are new to living near a watercourse, ask your risk management authority for advice.

Your property may include a watercourse that runs in a culvert. You have the same responsibilities for the upkeep of the culvert as if it was an open watercourse.

If you do not carry out your responsibilities, you could face legal action.

If you see any activity that could damage the environment or increase flood risk, please report it to your risk management authority as soon as possible. Water and land pollution or blockages which increase the risk of flooding should be reported to the Environment Agency **incident hotline** on **0800 80 70 60** (Freephone*, 24 hour service). Do not report incidents by email as this could delay the response.

*Calls from mobile phones are charged at your network operator's rates.

3 Flood risk management

As a riparian owner you also have a responsibility to manage your own flood risk.

More than two million properties in England and Wales are at risk from flooding from rivers and the sea. Changes in our climate, resulting in fiercer storms and wetter winters, will increase that risk. It will never be possible to prevent flooding but we can all manage flood risk to reduce the likelihood of flooding and its impact.

The term ‘flood risk management’ is used to describe the work of risk management authorities such as the Environment Agency, local authorities and Internal Drainage Boards. They aim to reduce the likelihood of flooding by:

- managing flood risk from all sources including river and coastal systems, surface runoff and ground water;

- constructing and managing defences, where appropriate;
- maintaining watercourses and flood defences, where appropriate.

They work together to reduce the impact of floods through:

- influencing land use planning, what is built and where;
- regulating works carried out in rivers;
- better flood warning;
- faster emergency responses.

There is more information about what the Environment Agency, local authorities and Internal Drainage Boards do in Appendices 1 and 2.



IMPORTANT NOTE

Your risk management authority can designate a feature on your land as a flood risk management asset. Features and structures such as garden walls that were not designed to manage flood risk can still help to do that job.

They will give you at least 28 days notice if they decide to do this. They will also give you details of the feature and explain why they want to designate it. You have a right to challenge any designation if you do not agree with what is proposed.

Features and structures that have been designated as an asset cannot be altered, removed or replaced without the consent of the responsible authority.

For further information and guidance please contact your risk management authority.

Flood and coastal erosion risk management plans look at flood risk on a large scale. This allows risk management authorities to examine whether reducing risk in one area might change, or even increase, the risk elsewhere.

During a flood, your local authority provides emergency aid to householders, which may include supplying sandbags. Please contact your local authority for further information on its role during a flood.



4 Understanding flood risk



Floodwater can come from overland flow, groundwater, rivers and the sea. Land and property near watercourses and the sea could be at risk from flooding. The Environment Agency can tell you about that risk, how flood warnings are issued, and what to do when there is a flood.

The Environment Agency's maps show the extent of flooding from rivers and the sea in England and Wales. They are available from Environment Agency local offices or online at www.gov.uk/prepare-for-a-flood. The maps also show flood defences and the areas they protect.

You should also telephone the Environment Agency's Floodline on **0345 988 1188** for local flood risk information and to find out if you can receive free flood warnings. For further information on flooding and advice on how to prepare for a flood, how to reduce the impact of flooding and what to do when it floods, visit

the Environment Agency website at www.gov.uk/prepare-for-a-flood. Your risk management authority and the National Flood Forum (www.nationalfloodforum.org.uk/) are also good sources of information and help.

RIVERS CAN BE DANGEROUS

Water may look harmless, but it can hide strong flows. Water can be deep and powerful, especially near weirs and sluices. Always be aware of the risk of possible injury or even death when around water.

5 Flood defence/ ordinary watercourse consents

You should discuss your plans to work on or near a watercourse with your risk management authority as early as possible. Submit your plans both to the risk management authority and to your local planning authority. The risk management authority will tell you whether you need its consent before doing the works. It takes many environmental factors into account before authorising work. These include flood risk, wildlife conservation, fisheries, tidal limits and the reshaping of the river and landscape.



Some sites are important for conservation or have archaeological value. If your work would affect one of these sites, you may need other permissions from the relevant English or Welsh authorities (see section 14 *The role of other organisations*).

The type of consent you need will depend on the type of watercourse you want to work in.

1. Flood Defence Consents for works on main rivers

The Water Resources Act 1991 and associated byelaws require you to contact your local **Environment Agency office** to apply for formal consent for works in, over, under or adjacent to main rivers. Main rivers are defined in section 15 below

The current application fee is **£50 per structure**.

2. Flood Defence (in England) / Ordinary Watercourse (in Wales) Consents for works on ordinary watercourses

Under the Land Drainage Act 1991, you need your **local authority or Internal Drainage Board** to approve

any works that will create or alter a mill dam, weir or other similar obstruction to the flow of an ordinary watercourse, including any proposals to install culverts or alter them in a manner that would be likely to affect the flow of water. Ordinary watercourses are defined in section 15 below.

The current application fee is **£50 per structure**.

Risk management authorities discourage culverts in watercourses (see section 9).

Contact your risk management authority as soon as possible to discuss your plans. It will need to see detailed proposals for the work and receive your consent application, including the fee, at least two months before you intend to start work.

When applying for consent, you may need to complete a Water Framework Directive compliance assessment. This is to ensure your proposal does not harm the environment and helps to deliver the actions set out in your local River Basin Management Plan. Water Framework Directive compliance assessments can be time consuming. Please contact your risk management authority at an early stage to find out if they need an

assessment, and agree its scope. This avoids delays and wasted effort. Once preliminary details have been agreed, you can complete the application form and return it to the authority with the appropriate fee.

The risk management authority will decide whether or not they agree to the works within two months. You can appeal against the decision if you think consent has been refused unreasonably. You will be told more about the appeals procedure if the authority decides to refuse consent. An independent arbitrator will hear the appeal.

You must not do any work without consent. If you do, it could be expensive. The risk management authority can reclaim from you the cost of whatever action they decide is necessary to remove or alter your work. They can also require you to put things right. If you fail to comply with a notice to rectify problems you may face criminal charges.

A consent only covers the impact of the structure on flood risk and the environment:

The risk management authority does not assess or approve the design of a structure or check whether your plan complies with other legislation, such

as health and safety. It does not allow you to carry out works on land or rivers that you do not own. You must have the landowner's permission as well as the consent.

If you are a landowner affected by flooding, you may benefit from an environmental stewardship scheme that focuses on the coast or floodplain, or the equivalent scheme in Wales, which is known as Glastir. The relevant authority can give you advice; Natural England (www.gov.uk/government/organisations/natural-england) or, in Wales the Welsh Government (<http://gov.wales/topics/environmentcountryside/farmingandcountryside/farming/schemes/glastir/?lang=en>).

You may also be able to apply to a conservation scheme for the restoration of, or creation of, features in a watercourse or on the floodplain. You will still require consent for any works and may have to show this consent before a conservation scheme can be agreed. Contact the funding organisation and the risk management authority's local office before you make a funding application to avoid delays.

6 Planning permission

Works on a watercourse may require planning permission, as well as flood defence or ordinary watercourse consent. Your local planning authority can advise whether your proposed works will require planning permission, and possibly a flood risk/flood consequence assessment to support your application.

Your local planning authority may require you to provide an Environmental Statement if your proposed works on a watercourse or lake could have a significant environmental impact. Contact your local planning authority for more information.

The Environment Agency is a statutory consultee on planning applications that relate to the environmental matters they are responsible for, including protecting floodplains from inappropriate development. Local Environment Agency staff can advise you on development issues in the floodplain. The Environment Agency comments on planning policies and applications to local planning authorities. But it is the local planning authority that makes these policies and approves these applications.

For details of government policy on development and flood risk, see:

- The National Planning Policy Framework and Planning Practical Guidance. This sets out the Government's requirements for the Town and Country planning system in England.
- *Technical Advice Note 15*, published by the Welsh Government in Wales.

These publications and other information are available for England from the Department of Communities and Local Government website www.gov.uk/government/publications/national-planning-policy-framework--2 and for Wales at the Welsh Government website <http://gov.wales/topics/planning/policy/tans/tan15/?lang=en>.

7 Other consents and licences



You may need the Environment Agency's permission for other activities which affect the water environment.

Water resources

You may need a licence from the Environment Agency to abstract water from or impound water on a watercourse. They will ensure that:

- your proposals will not harm the environment;
- existing abstraction rights are protected;
- water resources are managed in the best interests of the environment and other lawful users.

You will almost certainly need an abstraction licence if you want to:

- remove or abstract water from a surface source such as a river, stream or canal; and
- take more than 20 cubic metres (approximately 4,400 gallons) a day.

Contact your local Environment

Agency office if you want to abstract water. The Environment Agency guide *Abstracting water - a guide to getting your licence* is available at: www.gov.uk/topic/environmental-management/water

Hydropower (or hydroelectric power) schemes harness the energy from flowing water to generate electricity, using a turbine or other device. There are various permissions required if you would like to set up a hydropower scheme. For more information please call the Environment Agency or visit their website at www.gov.uk/government/collections/hydropower-schemes-guidelines-and-applying-for-permission.

Water abstraction is a cross compliance standard. Cross Compliance is the set of conditions which have to be met by farmers who

Other consents and licences

claim payments under the Common Agricultural Policy (CAP) (such as the Single Payment Scheme). These conditions cover public, animal and plant health, animal welfare, the environment and landscape features. If you are a farmer and do not meet these rules it may result in reductions to your Single Farm Payment or other scheme payments. See section 13 for further information on Cross Compliance Standards and the Single Payment Scheme.

Water discharge activities/ groundwater activities

You may require an environmental permit or exemption or a consent from your Internal Drainage Board (definition in section 15) if you want to release or discharge any water or trade or sewage effluent to ‘controlled waters’. Controlled waters include main rivers, ordinary watercourses, some lakes and ponds, canals, reservoirs and underground sources.

If the water is clean surface runoff, for example, from a roof, road, pathway or clean hard standing area, you do not need a permit or exemption. You just need to make sure your discharge stays clean and uncontaminated.

You may also need separate flood defence or ordinary watercourse consent from your local risk management authority if you are building a structure such as a headwall for discharges. The Environment Agency uses the consents system to protect water quality and its environmental value. They set water quality objectives and make sure discharges comply with European Directive standards.

For more information on environmental permits visit the Environment Agency website at www.gov.uk/environmental-permit-check-if-you-need-one.

Fisheries

The Environment Agency has a duty to maintain, improve and develop fisheries. It assesses stock, improves habitat and restocks rivers. It grants and regulates licences to introduce and remove fish, as well as issuing rod licences and commercial eel and salmon licences. The Salmon and Freshwater Fisheries Act 1975, the Salmon Act 1986, and various byelaws cover this work.

The Environment Agency regulates structures, sluices and dams that

stop freshwater fish, salmon, trout and eels moving along the river.

If you want to build a new structure or alter or refurbish an existing one on a river on your land, you may need to install a fish pass or screen in accordance with the Salmon and Fresh Water Fisheries Act 1975, or an eel pass or screen in accordance with the Eels (England and Wales) Regulations 2009 Statutory Instrument No. 3344.

Over the coming years, the Environment Agency will be informing land owners if they will need to install an eel pass or screen on their existing structures. If you intend to build, modify or maintain an existing structure you are legally obliged to inform the Environment Agency. Contact the fisheries and biodiversity team at your local Environment Agency office for more information.

You must have an Environment Agency rod licence if you are fishing for salmon, trout, freshwater fish or eels in:

- England (except the River Tweed);
- Wales;
- the Border Esk and its tributaries in Scotland.

Money from licence sales funds fisheries management. If you fish

without a licence, you could be fined up to £2,500.

Recreation and navigation

The Environment Agency has a duty to encourage the appropriate recreational use of watercourses. On some rivers they are also responsible for navigation. In this role the Environment Agency may require special licensing or place restrictions on plans for the bed or banks of a river. These requirements may affect proposals for mooring and landing facilities and you may also need a boat licence.

Right of entry

Your risk management authority may need to come onto your land to carry out flood risk management work. Risk management authorities try to make sure that they always have access to riverbanks, so that they can carry out essential maintenance and other work quickly and safely.

They have statutory powers of entry so that they can do their job properly and without delay. Whenever possible they will co-operate with you, but they can obtain a warrant from the courts if you refuse them entry to your land. All risk management authority staff carry identity cards.

8 Water Framework Directive



Like riparian land owners, all risk management authorities must consider the Water Framework Directive when they plan works on a watercourse.

The Water Framework Directive is a European law, which provides a framework for the protection of the water environment (including rivers, lakes, estuaries and other watercourses). It aims to:

- protect and enhance our water environment;
- promote sustainable water consumption;
- reduce water pollution;
- lessen the effects of floods and droughts.

The Water Framework Directive is being applied in England and Wales using River Basin Management Plans. When the Environment Agency does flood risk management works, it assesses whether its proposals could damage the river. If this is the case,

it must complete a Water Framework Directive compliance assessment.

It must make sure that the proposal does not cause environmental harm, and helps to deliver the actions set out in the local River Basin Management Plan. This also applies to any person who would like to carry out works affecting a watercourse.

Under the Water Framework Directive, a riparian owner who harms a watercourse may be required to put it right.

For more information on how the Water Framework Directive affects you, please visit the Environment Agency website www.gov.uk/government/collections/river-basin-management-plans.

9 Culverts

A culvert is a watercourse that has been enclosed in a structure such as a pipe.

This is usually done so that the land above the watercourse can be used for other things, for example a driveway or school playground. Culverts do not include sewers. The legal definition of a culvert is set out in the explanation of terms in section 15.

Risk management authorities discourage the construction of new culverts because they increase flood risk and damage the environment. They are likely to only allow a culvert to be built if there is no alternative. If you want to build a new culvert or alter an existing one, your local risk management authority must consent to the works. Please contact them for more information.

If there is a culvert on your land, you generally own it from where it enters to the point it leaves your land. You are responsible for maintaining culverts on your land. Culverts can

CULVERTS CAN BE DANGEROUS

You risk injury, drowning or becoming trapped by going into a culvert. Culverts are confined spaces that can contain noxious gases. Only trained, properly equipped people should go inside them.

collapse and cause the ground above to subside if they are not maintained properly. Water cannot flow through blocked culverts, and may back up and cause flooding above ground.

It is not always easy to find culverts, especially if they were built a long time ago. Maps and records may not be accurate or could have been lost or never made in the first place. If you think you have a culvert on your land, but do not know where it is or are worried about its condition, you should arrange for a professional company to do a survey. Your risk management authority also has some information on culverts.

It is your responsibility to let water flow through your land without obstruction, pollution or diversion affecting the rights of others. This means you must clear a blocked culvert on your land or under your property.

10 Mills and weirs



A river control structure affects river levels and flow, for example a mill dam or weir. If you own one you are legally obliged to maintain and operate the structure properly.

You must also fulfil your land drainage byelaw obligations which are explained in Appendices 1 and 2. If anyone suffers loss or damage because you have changed or neglected your structure they can take civil action against you. You must:

- keep gates and screens clear of obstructions so that they work properly.
- obtain an abstraction licence if you intend to take water from the river. See section 7 for more details.
- contact your risk management authority if you want to build a weir, sluice gate or other control structure, or if you would like to modify an existing structure. You may need their consent, and possibly an impounding licence from the Environment Agency. Impoundment licenses are needed when you want to dam a watercourse or build a weir. Risk management authorities

discourage these obstructions being built because of their environmental impacts.

You may also be required to include a fish pass or screen when a river control structure is built, rebuilt or refurbished to any extent.

You can discuss the maintenance and operation of river control structures with your risk management authority. If you are buying a property with a river control structure, contact them to introduce yourself. If your structure is on a main river your risk management authority will be the Environment Agency and if your structure is on an ordinary watercourse it will be either your local authority or Internal Drainage Board. More information on these risk management authorities is available in appendices 1 and 2. You can find out what you need to know, how you can work with them and what problems may arise.

11 Tidal watercourses

The tide can affect rivers that flow into the sea for large distances inland.

If the watercourse on your land is affected by the tide, your land is downstream of the tidal limit. In this case, you may require a marine licence from the Marine Management Organisation (MMO) in England and the Marine Consent Unit (MCU) in the Welsh Government before doing some types of work. This licence is in addition to the flood defence consent described in section 5.

The Environment Agency can waive a flood defence consent if satisfied that a marine licence adequately addresses flood risk management issues. Please contact the Environment Agency and MMO or MCU to discuss this further.

Please contact your risk management authority and the MMO or MCU as soon as possible if you are planning works in a tidal watercourse. They will tell you which licences you need.

For further information on marine licensing in England visit the MMO website www.gov.uk/government/organisations/marine-management-organisation.

For further information on marine licensing in Wales visit the Welsh Government website <http://gov.wales/topics/environmentcountryside/marineandfisheries/licensing/marine-licensing/?lang=en>

12 Erosion of river banks

Moving water naturally wears away riverbanks causing erosion. Narrowing the river channel, reinforcing the banks in the wrong place and overgrazing the banks can cause more erosion.

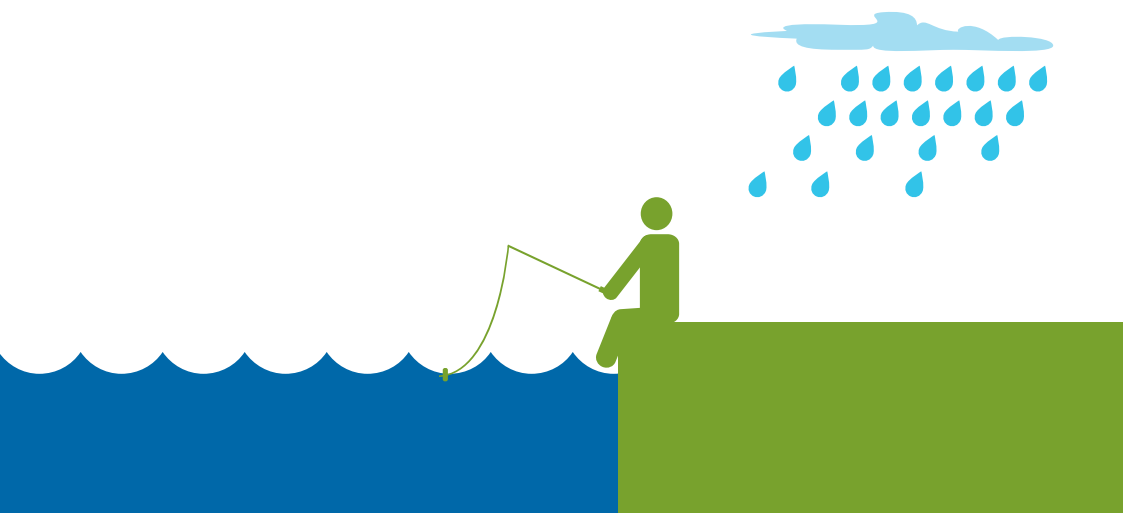
The landowner is usually responsible for work to reduce bank erosion. Risk management authorities usually only get involved where natural erosion threatens a flood defence. The local risk management authority will probably need to agree to any bank protection work. They will encourage you to use soft engineering techniques, where possible. This means using natural materials such as woven willow spiling or planting to limit erosion, rather than blockstone or steel sheet piles.



13 Land management

Farmers should use techniques to prevent rainwater from carrying off topsoil into the watercourse and leading to a potential pollution incident. This runoff damages the land and the ecology, quality and capacity of the river channel. Allowing runoff may constitute a criminal offence. If you are a farmer, this could threaten your Single Farm Payment.

Soil protection is a cross compliance standard and all claimants are required to complete and retain on farm a Soil Protection Review (SPR) 2010, which is defined in section 15.



Land management

You can find information about preventing soil erosion and runoff in the following publications:

- The Environment Agency booklet, *Best farming practice: profiting from a good environment* (2003); Soil Protection Review 2010 at www.rpa.defra.gov.uk/crosscompliance/farmerguidance
- the Defra booklet *Single Payment Scheme. Cross Compliance. Guidance for Soil Management* (2010): www.rpa.defra.gov.uk/crosscompliance/farmerguidance
- Think Soils Publication, which gives soil assessment guidance with the aim of avoiding runoff and erosion: <http://adlib.everysite.co.uk/adlib/defra/content.aspx?doc=263232&id=263233>
- Welsh Government cross compliance self assessment guidance: <http://gov.wales/topics/environmentcountryside/farmingandcountryside/farming/crosscompliance/?lang=en>

If you live in England you could receive money under the Environmental Stewardship scheme to help improve your management practices. Visit the Environment Agency web site www.gov.uk/environmental-stewardship for more information.

If you live in Wales you could receive money under Glastir which pays for the delivery of specific environmental goods and services aimed at combating climate change, improving water management and maintaining and enhancing biodiversity. Visit the Welsh Government website for more information <http://gov.wales/topics/environmentcountryside/farmingandcountryside/farming/schemes/glastir/?lang=en>

For more information on pollution prevention, please see the Environment Agency's pollution prevention guidance advice, which is available on their website or from their local office.

Cross compliance and Single Payment Scheme

If you claim the Single Payment Scheme or certain Rural Development Scheme payments, such as Environmental Stewardship, then cross compliance rules will apply to you. Cross compliance includes a set of specific European legal requirements, known as Statutory Management Requirements (SMRs) and standards, based on a legal Framework, which require you to keep your land in Good Agricultural and Environmental Condition (GAEC). Several of these SMRs and GAECs are directly applicable to protecting watercourses and also cover the land around watercourses.

The Guide to Cross Compliance in England 2012 edition outlines the rules you must follow and you should read this carefully if you claim, or intend to claim, any of these payments. If you fail to meet these rules then the Rural Payments Agency (RPA) may reduce your payments. Information on cross compliance, including all guidance documents, can be found on the RPA website at www.gov.uk/government/collections/cross-compliance.

If you need technical advice or assistance about cross compliance, please phone the Farming Advice Service on 0345 345 1302 (Monday to Friday, 9am to 5pm) or visit their website at www.gov.uk/government/groups/farming-advice-service.

The Welsh Assembly Government has published *A Farmer's guide to cross compliance* which outlines the regulatory requirement that farmers have to meet in order to receive the Single Payment Scheme and Rural Development area based scheme payments. Failure to meet any of the cross compliance standards could result in a financial penalty being imposed on your Single Farm Payment and Rural Development area based schemes.

Further information on cross compliance for farmers in Wales is available on the Welsh Government website at: <http://gov.wales/topics/environmentcountryside/farmingandcountryside/farming/crosscompliance/?lang=en>

14 The role of other organisations

Archaeology

Your local authority is responsible for making sure that areas of archaeological importance are protected from damage that could be caused by works in or near watercourses. If your proposed works may affect archaeological remains, or if you discover archaeological remains on your land during the works, you should contact your local authority. The local archaeological officer will be able to advise you further.

Nature conservation

You will need permission for works in or near a watercourse from a conservation body as well as the risk management authority if your proposed works:

- are on or may affect a site protected by law, such as a Site of Special Scientific Interest (SSSI) or Special Area of Conservation; or
- are on a site which supports a legally protected species, such as otters or water voles.

In these circumstances you must contact the relevant conservation body:

- Natural England. Visit www.gov.uk/government/organisations/natural-england.
- Countryside Council for Wales. Visit www.ccw.gov.uk.

Ask your risk management authority for advice if you are not sure who to contact.





Navigation

The tidal reaches of many rivers, where the sea flows in and out of the mouth of the river, have public rights of navigation. Harbour authorities may have some control in these reaches. However, there is no public right of navigation on most non-tidal watercourses, but the public can use some specific rivers and canals administered by navigation authorities, private companies or the Environment Agency.

Marine Management Organisation (MMO) and Marine Consent Unit (MCU)

If the watercourse running through or alongside your land is affected by the tide, you may require a marine licence from the MMO in England or MCU

in Wales as well as a flood defence or ordinary watercourse consent before doing works. (see section 11) The MMO and MCU are interested in works on tidal watercourses because they affect the marine environment.

Rural Payments Agency/ Rural Payments Wales

The Rural Payments Agency in England and Rural Payments Wales are the paying agencies for Common Agricultural Policy schemes such as the Single Payment Scheme. They are also Competent Control Authorities for cross compliance and carry out inspections to check if claimants are adhering to the cross compliance rules, including those which protect watercourses.

15 Explanation of terms

Main rivers

Main rivers are usually larger streams and rivers, but some of them are smaller watercourses of local significance. In England Defra decides which watercourses are the main rivers, and the Welsh Government does this in Wales.

Main rivers are marked on an official document called the main river map. Environment Agency local offices have copies of these maps.

Main rivers can include any structure that controls or regulates the flow of water in, into or out of the channel.

Ordinary watercourse

An ordinary watercourse is every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows, but which does not form part of a main river. The local authority or Internal Drainage Board has powers

on ordinary watercourses similar to the Environment Agency's powers on main rivers.

Lead local flood authority

In England this means—

- (a) the unitary authority for the area, or
- (b) if there is no unitary authority, the county council for the area.

In Wales this means—

- (a) the county council for the area;
- (b) the county borough council for the area.

Internal Drainage Board

Internal Drainage Boards (IDBs) are established in areas of special drainage known as drainage districts. Their functions include the supervision of land drainage, water level management and flood risk management works and regulation on ordinary watercourses.



Culvert

A covered channel or pipe designed to prevent the obstruction of a watercourse or drainage path by an artificial construction.

Flood defence

Some legislation still uses the terms 'flood defence' or 'land drainage'. We now refer to these activities as 'flood risk management', but may use the other terms for legal purposes.

Floodplain

A floodplain is an area of land over which river or sea water flows or is stored during a flood. Floodplains usually extend beyond the land immediately next to a watercourse. There is often pressure to build on them. However, buildings or other artificial objects can obstruct floodplains, block the flow of water and make flooding worse.

Groundwater

Groundwater is all water which is below the surface of the ground and in direct contact with the ground or subsoil.

Surface water runoff

Surface water runoff is rainwater, including snow. It is water on the surface of the ground, whether or not it is moving, which has not entered a watercourse, drainage system or public sewer.

Risk management authority

The following risk management authorities have powers over and responsibilities for watercourse management:

- the Environment Agency;
- Lead Local Flood Authorities (LLFAs);
- Internal Drainage Boards (IDBs).

Water discharge activity

A water discharge activity is the discharge or entry to surface waters which are controlled waters (but not to groundwater) of any poisonous, noxious or polluting matter, waste matter, trade effluent or sewage effluent. It also includes activities that cause deposits to be carried away in water (except for those that relate to land drainage, flood prevention or navigation). Examples are the removal of accumulated deposits from the bottom of a channel caused by a dam holding back waters or, in some cases, cutting or uprooting a substantial amount of vegetation in or near inland freshwaters if the debris falls into the water.

Groundwater Activity

A groundwater activity is the discharge of a pollutant that results in, or might lead to, a direct or indirect input to groundwater. It also covers:

- any other discharge that might lead to a direct or indirect input of a pollutant to groundwater;
- an activity in respect of which a notice under Schedule 22 of the Environmental Permitting (England and Wales) Regulations 2010 has taken effect; or
- an activity that might lead to a discharge, as already mentioned, where that activity is carried on as part of the operation of a regulated facility of another class.

Soil Protection Review (SPR) 2010

This document requires farmers to complete a risk assessment for all the fields on their farm and select measures to address any soil issues.

For help and information
during a flood call
Floodline on 0345 988
1188



1 The role of the Environment Agency

The Environment Agency is one of the risk management authorities as defined by the Flood and Water Management Act 2010. Protecting the river environment and managing flood risk is part of its job. This means that some of its duties and powers affect riparian owners.

The Environment Agency is the risk management authority you need to contact if you would like more information on main rivers and matters relating to flooding from main rivers and the sea.

Powers

The Environment Agency has powers to work on main rivers (defined in section 15) and the sea to manage flood risk

These powers allow it to do work. However, it does not have to maintain or construct new works on main rivers or the sea. It is unlikely to maintain a watercourse to improve the amenity of the river or to stop erosion that

does not increase flood risk.

Flood risk management works can include:

- constructing and maintaining flood risk management assets, for example flood banks, and works on main rivers to manage water levels and make sure flood water can flow freely.
- operating flood risk management assets during a flood.
- dredging the river. The Environment Agency can dispose of the material on land within reach of the dredging machine's boom.
- issuing flood warnings.

It can also do work to prevent environmental damage to watercourses, or to restore conditions where damage has already been done.

The Environment Agency has the power to make byelaws. Your local Environment Agency office can provide you with the relevant byelaws for where you live.

The Environment Agency can serve notice on you if you have not maintained a watercourse on your land that is causing problems, such as increasing flood risk.

Duties

The Environment Agency has strategic roles for all sources of flooding and coastal erosion in England and Wales. It has produced with Defra a national strategy for flood and coastal erosion risk management in England and worked with the Welsh Government on a national strategy for Wales. These strategies show how communities, the public sector and other organisations can work together to manage the risk. This includes the development of local flood risk management strategies by lead local flood authorities such as county and unitary councils.

A summary of the National Strategy for England can be found at www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england.

Information on the National Strategy for Wales can be found at <http://gov.wales/topics/environmentcountryside/epq/flooding/nationalstrategy/strategy/?lang=en>.

The Environment Agency also has a duty to promote the conservation of the water environment, the natural beauty of rivers and wetlands, and the wildlife that lives there. It assesses the impacts of any proposal on the whole environment. For riparian owners, this means that the Environment Agency will assess the environmental impacts of proposals for any works in or adjacent to rivers. It will discuss how and when the work might be done to protect the environment.

2 The Role of your local authority (LA) and Internal Drainage Board (IDB)

Certain local authorities (LAs) as well as Internal Drainage Boards (IDBs) are risk management authorities. They have powers to manage flood risk from **ordinary watercourses**. In their flood risk management role LAs are known as Lead Local Flood Authorities (LLFA) (see explanation of terms in section 15) and IDBs are known as risk management authorities as explained earlier. Not all local authorities are risk management authorities and therefore LLFAs. The definition of an LLFA in section 15 outlines the types of local authority in both England and Wales that act as risk management authorities.

If you live in an area with a two tier local authority it is the county council who will act as the **Lead Local Flood Authority**. However, you should contact your local authority to confirm who your contact should be.

In areas known as **internal drainage districts** the risk management authority is the **Internal Drainage Board** for the area and they have

powers on ordinary watercourses instead of the LA.

IDBs are local public bodies established in areas of special drainage need in England and Wales to manage flood risk and water levels on behalf of their community. For more information on Internal Drainage Boards please visit the Association of Drainage Authorities website www.ada.org.uk/

IDBs are generally located in the Broads, Fens, East Anglia, Lincolnshire, Somerset Levels and Yorkshire. To determine whether your property lies within an internal drainage district please contact the Association of Drainage Authorities on 02476 992889 or visit their website www.ada.org.uk/idb_members_map.html

LLFAs and IDBs have an important role in managing local flood risk, which covers flooding from surface water, ground water and ordinary watercourses.

You need permission from your LA or IDB to do certain types of works in an ordinary watercourse. These permissions are called Flood Defence Consents in England and Ordinary Watercourse Consents in Wales. The activities that require consent are described in section 5.

We recommend that you contact your risk management authority as soon as possible if you are planning works in an ordinary watercourse.

Powers

Under the Land Drainage Act 1991 and recent changes in the Flood and Water Management Act 2010, LAs and IDBs have powers to manage flood risk from ordinary watercourses, surface water runoff, and groundwater.

Their powers allow them to:

- carry out works to manage flood risk from these sources and that will contribute to the local flood risk management strategy.
- serve notice on you if you have not maintained a watercourse on your land, and the proper flow of water is not possible or it is increasing flood risk.

Works to manage flood risk can include:

- maintaining existing works, including buildings and structures. This includes repairing and

generally maintaining the efficiency of an existing watercourse or drainage work: improving existing works: altering or removing works and reducing or increasing the level of water in a place.

- operating existing structures (such as sluice gates or pumps).
- building or repairing new works, including buildings, structures, watercourses, drainage works and machinery.

These powers allow them to do work. However, they do not have to maintain or construct new works on ordinary watercourses. LAs and IDBs may also have additional regulations and bylaws, which will affect what you can and cannot do on an ordinary watercourse.

Duties

All LLFAs in England and Wales must develop, maintain, apply and monitor a local flood risk management strategy for their area. The strategy must deal with the three sources of flood risk outlined above and interactions between these sources and other types of flood risk. Please contact your LLFA for more information on your local flood risk management strategy.

LLFAs also keep a register of structures that have a significant effect on flood management in their area. The list includes who owns the structure and what state of repair it is in.

Notes

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Notes

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